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in Iraq

The 16th Sustainment Brigade: Supporting the Drawdown
The Commander's Emergency Response Program
Sustaining the Army's First Advise and Assist Brigade

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Cover: Since the U.S.-Iraq security agreement took effect on 1 January 2009, U.S. and coalition forces in Iraq have transitioned to stability operations. This environment is characterized by a drawdown in U.S. troop levels, partnerships with Iraqi units for both training and joint operations, and support of humanitarian relief and reconstruction efforts. The articles beginning on pages **7** and **10** and the series of articles profiling the 16th Sustainment Brigade beginning on page **18** examine the sustainment of stability operations in Iraq. In the cover photo, a joint U.S. and Iraqi convoy lines up before leaving the staging area at Contingency Operating Base Speicher to deliver Iraqi textbooks to schools around Salah ad Din province. *(Photo by SSG Raul Elliott)*

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A Paradigm Shift at NTC: CSSBs That Think "Inside the Box"

BY MAJOR JOHN M. RUTHS

The 60th Ordnance Company trains at the combat outpost live-fire range.

Fort Carson's 68th Combat Sustainment Support Battalion (CSSB) completed a National Training Center (NTC) rotation at Fort Irwin, California, in June 2009 in support of the 4th Infantry Brigade Combat Team (IBCT), 1st Infantry Division. The 4th IBCT's NTC rotation was focused on Operation Iraqi Freedom (OIF), and although the 68th CSSB was deploying to Afghanistan later in the year, it followed the OIF scenario without any problems.

During mission preparation, the 68th CSSB's leaders discovered that no CSSB had previously completed a rotation "in the box," meaning, located among the maneuver units in the middle of the fight. Instead, all CSSBs had occupied and operated out of a part of Fort Irwin that is often referred to as the "dust bowl," which

is now named Logistics Support Area (LSA) Warrior. Getting out of the dust bowl and inside the box is the subject of this article.

Training at NTC

"This was going to be our capstone training event," said Lieutenant Colonel Thomas Rivard, the 68th CSSB's commander. "The effort we put into it to plan, prepare, execute, and assess was tremendous. Our training objectives were bold, and the training payoff was irreplaceable. It's my contention that we created this effect by doing something which had not occurred before—fighting to train as a 'competitive' unit."

In this case, the term "competitive" means being located forward of the light line, required to use multiple

integrated laser engagement system gear, and being exposed to the various theater-replicated battle effects found at NTC—just like any unit in the 4th IBCT.

Training at a combat training center (CTC) like NTC is a key element of the training guidance from the 68th CSSB's higher headquarters, the 43d Sustainment Brigade. That training guidance instructs units to "fight to train" at a CTC before deployment. The CSSB took this guidance further by applying it to all of its formations, regardless of deployment orders.

The objectives of a CTC rotation for a sustainment company or battalion are to execute situational training exercises and full-spectrum operations to develop lethal small units that can effectively shoot, move, communicate, and fight in logistics convoys and also to improve small-unit command, control, communications, computers, and intelligence processes.

At the end of the rotation, the unit headquarters receives feedback about how well the unit performs the following functions: commanding and controlling their subordinate formations, leveraging Army Battle Command Systems and other technologies, conducting staff processes and battle drills, and executing the six required functions of a tactical operations center (TOC).

Soldiers from the 60th Ordnance Company handle ammunition at Forward Operating Base Reno.

Training Inside the Box

Because LSA Warrior is located on the main portion of Fort Irwin, units there are immune to the opposing force and the counterinsurgency environment of the main training area. Not only does this environment lack an interactive enemy, significant distracters exist that do not exist in the box, including the usual variety of installation restaurants, shopping, and entertainment venues. (Clearly, it can be difficult to focus on training with a Starbucks and post exchange nearby.) At LSA Warrior, the battle staff also lacks the situational awareness that units have while in the box.

"As the battalion commander," said Rivard, "I wanted our rotation to have the same feel as a deployment, and being in the maneuver box along with the IBCT we supported did just that—and even more. With our immersion into the environment, I was better able to incorporate the four elements of battle command, which are to visualize, understand, describe, and direct."

The unit benefited from a partnership with the 4th IBCT as well as its support unit, the 701st Brigade Support Battalion (BSB). In fact, the staff coordination that occurred laterally and vertically was an unintended benefit for everyone.

Commanders of CSSBs that had previously rotated through NTC had set up on LSA Warrior, just behind the echelons-above-brigade (EAB) building located adjacent to the rotational unit bivouac area. The reasons behind this course of action included access to the EAB communications architecture, proximity to the EAB personnel and their briefings, and simplicity of command and control.

At NTC, EAB personnel provide the logistics assets that are not resident with the BSBs as well as the sustainment pushes that a BSB could expect in theater. The EAB is expertly postured to provide most classes of supply, water, and trash removal for rotating units, and they do so with contractors operating military

vehicles. When a CSSB is part of an NTC rotation, it can expect to command and control the EAB assets and assume a logistics support mission on a general support basis. Where you choose to conduct your command and control determines the training payoff.

How the 68th CSSB Trained at NTC

Brigadier General Robert B. Abrams, the commanding general of NTC, has several axioms that he provides to commanders. Three of those axioms come to mind. First, train every day like your life depends on it. Second, get better every day; be ready for the first day of an actual deployment by the time your unit reaches training day 14. And third, be confident in yourself, your unit, and your leaders to deploy and succeed in the first 30 days in country. Internalizing Abram's guidance reminds us that CSSBs "fight to train" in the box.

Normally, the BCT headquarters, BSB, and brigade special troops battalion occupy NTC's largest forward operating base (FOB), which is FOB King. FOB King is also where a CSSB headquarters belongs. If not at FOB King, then the CSSB headquarters should occupy FOB Santa Fe (usually not activated), but only if another tactical force occupies this area or if the headquarters can bring its own Cisco-powered network (CPN) for communications.

Force protection is not so much the issue as is access to a CPN or joint network node, which allows the unit to see the digital common operational picture. To maximize training, units tend to be lenient about certain aspects of physical security. Basically, this means that units man only the entry control point and assume a guard force on the perimeter.

The training objectives listed in the 68th CSSB's letter of intent, as well those of the CSSB's subordinate 60th Ordnance Company, described what it wanted for the rotation. The CSSB asked to receive training in the following areas:
❏ Convoy live fire.
❏ Command and control with digital systems.

A 68th Combat Sustainment Support Battalion convoy security element prepares to leave Forward Operating Base King on an escort mission.

During its National Training Center rotation, the 68th Combat Sustainment Support Battalion's tactical operations center was located at Forward Operating Base King.

❑ Command and control of EAB logistics convoys using convoy security detachment elements.
❑ Establishment of a logistics support area.
❑ Planning and directing sustainment operations.
❑ Reacting to improvised explosive devices.
❑ Rules of engagement.
❑ Escalation of force measures.

The CSSB also added various tactical ammunition tasks for the 60th Ordnance Company. The battalion commander's letter of intent convinced senior trainers that the CSSB belonged at FOB King and not at LSA Warrior and led them to approve the paradigm shift.

The CSSB's battalion chaplain worked with seven other unit chaplains and provided battlefield ministry at the medical facility and mortuary affairs collection point located at the FOB and tended to the spiritual needs of the notional casualties. The battalion S–2 synchronized the CSSB's intelligence, surveillance, and reconnaissance efforts with those of the 4th IBCT S–2 and focused on pattern analysis and geographic intelligence analysis, including working with the change detection overlays provided by the unmanned aerial vehicle assets. These relationships proved fruitful and taught the CSSB the importance of establishing relationships with supported units in theater.

Augmenting the 68th CSSB's Capabilities

Deploying to NTC with only a headquarters creates a challenging training environment for any battalion, and such a small force provides little benefit to the rotational BCT. By adding assets referred to as IBUs (itty bitty units) to the Army Force Generation process, a CSSB headquarters can possess capabilities that are more in line with traditional planning, preparing, executing, and assessing, which are part of Soldier, leader, staff, and collective tasks.

Whenever possible, CSSBs should bring home-station units with them to NTC, and if none are available, the CSSB should request them from other locations. Few would argue that every logistics unit in the continental United States should rotate through a CTC once each year, whether they have a deployment scheduled or not. By doing so, commanders provide a capstone training exercise to a unit that would not otherwise have an annual training focus.

Using enablers like IBUs creates a vertical command and control structure that allows the CSSB headquarters to observe its systems, collect objective feedback, and then make adjustments to future training based on this feedback. In this way, the objective of the training rotation is to exercise the battalion as a learning organization and not merely a unit that occupies a site at NTC to execute routine logistics support.

An example of effectively integrating an IBU was the addition of the 60th Ordnance Company, which provided the 4th IBCT and the 701st BSB with ammunition capability while providing a realistic training opportunity for the smaller unit. The 60th

	Command and Control	Intelligence	Sustainment
P - Primary	Field Manual	Tactical Ground Reporting System	Battle Command Sustainment Support System
A - Alternate	Command Post of the Future (Ventrillo)	Distributed Common Ground System-Army	Voice Over Internet Protocol
C - Contingency	Blue Force Tracker	Command Post of the Future	Secret Internet Protocol Router Network
E - Emergency	Movement Tracking System	Secret Internet Protocol Router Network	Field Manual
R - Repository	Command Post of the Future	Tactical Ground Reporting System	Battle Command Sustainment Support System

The 68th Combat Sustainment Support Battalion identified these decision-making tools using the PACE–R taxonomy.

Ordnance Company's commander and first sergeant established a number of battle-focused training opportunities for their military occupational specialty 89B (ammunition specialist) and 89A (ammunition stock control and accounting specialist) Soldiers at the Fort Irwin ammunition supply point (ASP), the BCT's field ASP, and the ammunition transfer and holding point at FOB Reno.

At all locations, the 60th Ordnance Company expertly received, stored, and issued live ammunition for the 4th IBCT's live-fire events. In addition to handling 4 tons of ammunition at FOB Reno, the addition of Soldiers and leaders alleviated a 3-month backlog at Fort Irwin's ASP.

Adding only the 60th Ordnance Company was not without its challenges. The 68th CSSB was without a solution for conducting convoy operations in the IBCT's battlespace during full-spectrum operations. In January, 4 months before the rotation, the CSSB made the decision to obtain 24 gun trucks and use them as a convoy security detachment.

After drawing the M1151 uparmored high-mobility multipurpose wheeled vehicles from the Fort Carson Army field support battalion, a gun truck training mission was assigned to the CSSB's 360th Transportation Company, which was then designated to deploy with the CSSB. With the addition of two platoon leaders and platoon sergeants, the battalion was then postured to independently conduct convoy operations from EAB or from within the IBCT, thus creating a multiechelon training opportunity for the Soldiers and the battalion staff.

Without a doubt, the decision to include a convoy security detachment enabler provided the capability to operate more independently, and it also provided a valuable enabler to the 4th IBCT.

Improving Processes During Training

Being totally immersed in training, the 68th CSSB staff was free to improve processes and validate battle drills. After a mere 14 days in the training environment, the battle staff was able to validate most of its battle drills and react to many situations.

In addition to developing and refining TOC battle drills at FOB King, the CSSB's battle staff reworked its tactical standing operating procedures, created smart cards, refined the content and layout of routine briefs, and developed a workable battle rhythm for the rotation. Many experienced leaders would agree that working these battle staff processes is easier during a training deployment than during garrison operations and having the scenario to drive these processes adds vigor and realism.

Another advantage of positioning the CSSB's headquarters at FOB King was that the staff could visualize the battlefield through communications equipment by using the primary, alternate, contingency, emergency, and repository (PACE–R) taxonomy. (See chart above.) About PACE–R, Lieutenant Colonel Rivard said, "This visualization was invaluable to me as a commander, and I was able to translate the concept to the staff in terms of information management, knowledge management, and ultimately, situational understanding."

Having the opportunity to exercise the four components of battle command and the six functions of a TOC using these systems was essential to the CSSB's learning—and it was a training objective that would not have been achievable while positioned at LSA Warrior. The 43d Sustainment Brigade commander, Colonel Ed Daly, who provides command and control to the 68th CSSB when at Fort Carson, is known to say, "Are we training things right . . . and are we also training the right things?" Never before had the battalion exercised this number of Army Battle Command Systems, battle drills, and staff training events.

NTC offers superb training, but it is menu-driven; commanders decide what training their units need. CSSB commanders should deploy to NTC with an immersion mindset that allows commanders at all levels to stress systems early. It is your rotation, and the menu is diverse.

Major John M. Ruths is the S–3 for the 68th Combat Sustainment Support Battalion. He holds an M.B.A. degree with a concentration in logistics management from TUI University and is a graduate of the Combined Logistics Captains Career Course.

Sustainment in the Army's First Advise and Assist Brigade

BY LIEUTENANT COLONEL DAVID WILSON

The 4th Brigade Combat Team (BCT), 1st Armored Division, embarked upon its mission readiness exercise (MRX) at the National Training Center (NTC) at Fort Irwin, California, in January 2009 fully prepared to execute counterinsurgency operations. But while at NTC, the brigade received word that it would instead be deploying as the proof of principle for the advise and assist brigade (AAB) mission.

The AAB Mission

The AAB is a natural evolution of the role of the BCT in a stability operations environment. U.S. Soldiers now advise and assist Iraqi Security Forces (ISF), which include the Iraqi Army (IA), Iraqi National Police, and Department of Border Enforcement. In addition to the AAB mission, the 4th BCT would also be enabling civil capacity efforts of the U.S. Department of State provincial reconstruction teams in the southern Iraqi provinces of Dhi Qar, Maysan, and Muthana.

This bold shift in mission drew all leaders to look to this unified action with a keen eye while ensuring that it was nested across all operations. Field Manual (FM) 3–0, Operations, defines unified action as "the synchronization, coordination, and/or integration of the activities of governmental and nongovernmental entities with military operations to achieve unity of effort."

To facilitate the new mission, the brigade received additional personnel who were then embedded with the ISF on Iraqi bases. Military transition teams (MiTTs), border enforcement transition teams, port of entry teams, police training teams, and stability training teams rounded out the brigade personnel, and the brigade aligned with supported Iraqi units to accomplish the advise and assist mission.

Training at NTC

The 4th BCT saw the change in mission as an opportunity to execute a nontraditional training regimen that would set the conditions for success as it assumed the advise and assist mission. The commander saw the implications of the mission and knew that all entities had to work together effectively to achieve the campaign end state.

While at NTC, the brigade staff was given clear guidance by its commander, Colonel Peter Newell, to work through two lines of effort: first, to build civil capacity across the lines of governance, essential services, economic development, and rule of law security; and second, to advise, assist, and enable the ISF.

The 4th BCT's brigade support battalion (BSB), the 121st BSB, received this new focus for the BCT's mission and saw sustainment crossing all lines of effort. This allowed the BSB to stick with the fundamentals of requirements determination for operations and capabilities reviews for the sustainment mission. As stated in FM 4–0, Sustainment, "Successful sustainment enables freedom of action by increasing the number and quality of options available to the commander."

The unfamiliar element of the battalion's MRX was the partnership with the ISF. As the staff worked through the concept, it

Partnership and Tactical Overwatch

Partner Unit (Brigade Support Battalion)	Adviser Element (Military Transition Team)
• Fights together with an Iraqi Army unit.	Advises Iraqi Army units on—
• Assists with mission preparation.	• Sustainment at the division, brigade, and battalion levels.
• Provides mobile training teams that conduct focused sustainment training.	• Mission planning, preparation, execution, and assessment.
• Provides command and control of logistics training and advisory teams.	• Sustainment procedures.
• Acts as the Iraqi Army link to coalition enablers.	• Employment of logistics enablers.
	• Field workshops, headquarters support companies, motorized transportation regiments.

Through their logistics training and advisory teams, brigade support battalions are responsible for assisting their Iraqi partner units. Military transition teams are responsible for advising those Iraqi units.

sought assistance from NTC's Goldminer observer-controller team. The Goldminer team was able to provide the BSB with instant feedback from the Phoenix Academy at Camp Taji, Iraq. The battalion learned that Multi-National Security Transition Command-Iraq was creating logistics maintenance advisory teams (LMATs) to work in conjunction with the MiTTs to build the ISF's logistics capacity through training. This new information prompted the BSB to analyze how it could become an enabler of this vital mission of the sustainment warfighting function.

A critical step in the process was determining what the training requirements would be and if the ISF had any process resembling a mission-essential task list. There were several unknowns, such as the types of logistics units the ISF had, the status of their onhand equipment, their onhand personnel status, and the organization of their logistics units. Without answers to these questions initially during the MRX, the BSB focused its training on partnership, negotiation, and bilateral engagements. This allowed the BSB staff to prepare the commander for key-leader engagements and to work through the BATNA [best alternative to a negotiated agreement] and ZOPA [zone of possible agreement] to be achieved by the engagements.

The role players at NTC who assisted in the training were from the Multi-National Division-South region of Iraq. They served the BSB well by pressing for training of their forces, which did not have adequate equipment, funding, and resources. One of the BSB's many lessons learned was that U.S. units must let the ISF drive the training priorities and must coach them through building capacity across all sustainment and combat health support functions.

Deploying as an AAB

Following the NTC rotation, the 4th BCT attended the predeployment site survey (PDSS) and gained

The TAPE Model

Train — Identify issues and trends

Enable

Advise — Coach, teach, and mentor

Partner — Reinforce and facilitate

Enabling Iraqi partner units consists of three tasks: training, advising, and partnering.

further knowledge of the LMAT requirements that were being developed as well as the Multi-National Corps-Iraq requirement for unit partnership in theater. This requirement stated that BSBs were to partner with Iraqi motorized transportation regiments (MTRs) and forward support companies were to partner with headquarters and supply companies of Iraqi Army brigades.

After the PDSS, the BCT studied the information received during its visit with the 4th BCT, 1st Cavalry Division, which transferred authority to the 4th BCT, 1st Armored Division, and took time to develop its strategy for training and partnership. The strategy followed a crawl-walk-run model, and the brigade looked at developing the training and partnership along three lines: train the jundees (IA privates), train the trainer, and focus on joint operations.

Through fact finding and the PDSS, the 121st BSB realized that U.S. military logistics is not the same as ISF logistics. This allowed the battalion to focus on improving the ISF logistics posture by getting ISF sustainment units to work efficiently using their current system and not the U.S. system. The ISF's lack of confidence in their system was immediately obvious. The BSB decided to approach ISF training with the commander's model for support of the AAB, the TAPE [train, advise, partner, and enable] model. (See figure below.)

The 121st BSB's logisticians had to break new ground in determining how to deliver instruction that would build logistics capacity for the ISF. This effort started with an assessment of what the previous partner unit had established. The 27th BSB, 4th BCT, 1st Cavalry Division, had made great strides in embracing the embedded logistics MiTT as part of their team and had developed a training plan that would set guidelines for the MiTT to follow in their engagement with the MTR.

Much of what was being delivered focused on the individual training of Iraqi soldiers. This served as a good foundation and laid the groundwork for the 121st BSB to train, advise, partner, and enable.

The BSB's approach was to build on the actions already in place as it transitioned and moved from training individual Iraqi jundees to the train-the-trainer mode. The train-the-trainer mode gave the Iraqi partners the capability to deliver the instruction themselves, with coalition forces providing advice on the delivery of the instruction or adjustments necessary to move the instruction to a higher level.

The MTR commander used the BSB's feedback to develop his training priorities for subsequent engagements. In essence, this allowed the ISF to pick the training that they were most interested in receiving, based on the priorities of the MTR commander.

A big part in moving to the train-the-trainer mode
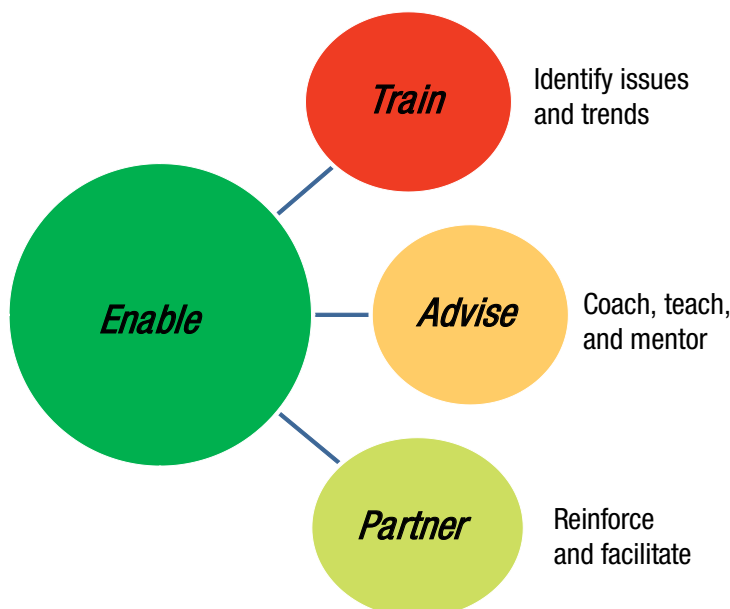
was the establishment of the 121st BSB logistics training and advisory team (LTAT). The LTAT was made up of senior noncommissioned officers (former drill sergeants, instructors, and linguists) and a unit commander providing oversight to focus the training efforts and identify any future key-leader engagements between the ISF and BSB commanders.

After a month of training with the ISF, the BSB could tell that the MiTT was the enhancer and the BSB (through the LTAT) was the enabler. The MiTT relied on the BSB's training capabilities to assist the MTR commander in achieving his training goals while the train-the-trainer efforts and the push for partnership started to gain ground.

Joint Logistics Convoys

Success in this partnership was evident when the MTR commander provided ISF soldiers and assets to partner with the BSB's sustainment replenishment operations. The MTR commander saw the partnership as an opportunity to improve his own convoy operations.

Through good faith that developed from the relationship, the MTR began running joint logistics convoys with the BSB. This effort was executed incrementally and started with the training of ground and convoy commanders for moving commodities within the coalition force and ISF logistics formation.

The commanders received instructions on troop-leading procedures, tactical convoy operations (based on the 121st BSB's Convoy Leader's Guide), escalation of force, and sharing the road (a method that prevents sustainment movements from impeding the highways that belong to the Iraqi people). This training culminated with convoy leader certification for the ground and convoy commanders and moved to the stage-setter phase of executing a logistics convoy.

The joint logistics convoy process for the ISF and coalition forces was based on a 96-hour timeline developed by the 121st BSB. The concept of operations developed at the brigade logistics command post by the support operations section (future operations) and the mission support order developed by the BSB S–3 section (current operations) set the conditions for the ISF to receive the information needed to coordinate the joint operation.

The concept of operations also allowed the MiTT to track the IA headquarters' planning once they received the mission. The ground and convoy commanders attended the sustainment synchronization meeting at the brigade logistics command post and ensured that the commodities to be moved were on track as they began precombat checks and inspections for the mission set, which often included KBR logistics assets within the convoy. This allowed the ISF to see the critical synchronization and coordination that occurs before any 121st BSB convoy.

The time leading up to the joint IA and coalition force logistics convoy was coined the "two minute drill" or the "NASCAR pit drill" by the BSB commander because of the intensity of the operations. At this time, the BSB would quickly check the vehicles for maintenance needs or have a quality control team inspect vehicles in the BSB motor pool. Critical staff sections, such as the S–1, would verify manifests for the tactical convoy system, and the electronic warfare officer would ensure that all counter remote-controlled improvised explosive device electronic warfare systems were in working order prior to departure.

Also during this time, the coalition force and IA convoy members would share a meal and attend the BSB S–2's joint threat brief that centered on route-focused intelligence preparation of the battlefield and the convoy commander's convoy mission brief. Following all briefings and the final precombat checks and inspections, the coalition force, ISF, and KBR convoy members would conduct a joint ground rehearsal to practice actions during movement, actions on contact, actions at destination, and preparations for return. The rehearsals were completed with BSB interpreters embedded in the ISF and coalition force formations (as they would be when mounted) so that the BSB could ensure that the IA fully understood the mission to be conducted as well as the tactics, techniques, and procedures for convoy operations.

After-action reviews from all stages of the partnership were provided to the MTR commander and the IA division MiTT so that the ISF could set the priorities for future training. The reviews also provided the MiTT with a good assessment of where the ISF partner was on the scale for the operational readiness assessment—a unit status report—provided to the Iraqi Ministry of Defense every month.

This sustainment mission in support of the AAB allowed 121st BSB logisticians to work with Iraqi partners to build their capabilities for sustainment while supporting the 4th BCT in a battlespace the size of South Carolina. Building the concept of support through sustainment targeting meetings synchronized sustainment across the BCT and allowed the BSB to incorporate contractors, ISF logisticians, and the BSB's organic sustainment platforms into its replenishment operations.

Synchronizing sustainment while partnering with the ISF allowed coalition forces to model the exact behavior the ISF wants to emulate. Those capabilities will endure long after the BSB's mission is complete. Logistics is the muscle that enables the fist to strike!

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The Commander's Emergency Response Program: Synergistic Results Through Training

BY MAJOR MARK W. LEE

Judicious spending by commanders can yield significant results in meeting the humanitarian needs of local populations and gaining their trust and cooperation.

T he Commander's Emergency Response Program (CERP) allows field commanders in Iraq and Afghanistan to fund projects designed to win hearts and minds, hunt enemies, and encourage the growth of local institutions in wartime. CERP provides U.S. Government appropriations directly to tactical units for the purpose of meeting the emergency needs of local Iraqi and Afghan civilians.

However, CERP's very novelty and importance can present challenges in its implementation because the undisciplined or uncoordinated use of CERP funds could result in Congress abruptly ending them. Such a fate is worth avoiding because the program's early success demonstrates that relatively small amounts of money spent locally and intelligently by commanders can yield enormous benefits.

Origins of CERP

CERP began as an effort to provide commanders in Iraq with a stabilization tool to benefit the Iraqi people. Initial resources for that effort came from stockpiles of ill-gotten Ba'athist Party cash left behind by Saddam Hussein's regime. This cash, along with other regime assets recovered in the weeks and months that followed the overthrow of Saddam Hussein, provided a source of funding for projects that responded to the emergency needs of the Iraqi people.

In contrast to the devious handling of these funds by senior Ba'athists, the American management of the recovered assets was transparent, well-documented, and subject to law. Field commanders and senior policymakers ensured that seizure, control, and disposition of former regime property complied with international law on armed conflict and occupation. In particular, the U.S. Central Command (CENTCOM) publicized that,

in seizing the funds, coalition forces were taking possession of and safeguarding movable property of the State of Iraq rather than the personal property of Iraqi citizens. Evidence that many of the assets had been obtained from criminal skimming of profits from oil sales (in violation of United Nations sanctions) caused coalition leaders to reject the notion that individual senior Ba'athists were the rightful owners.

The lack of functioning Iraqi civil institutions following Saddam Hussein's overthrow resulted in a mass of emergency needs. Clearing streets of destroyed vehicles, bulldozing mountains of garbage, distributing rations, repairing damaged roofs, wells, and sewers, rehabilitating broken-down jails and police stations, and tending to a variety of urgent medical needs became the business of U.S. Soldiers. These relief and reconstruction activities were undertaken when the pace of continuing combat operations against hostile elements permitted or, in some cases, when grave collateral damage demanded a quick U.S. response.

CERP Today

The purpose of CERP remains unchanged: to enable commanders to successfully respond to urgent humanitarian relief and reconstruction requirements within their areas of responsibility by carrying out programs that immediately assist the local population. These programs include

Iraqi workers wet down dirt so they can mix cement to be used in constructing the Basra Talent School and the Al Jameat and Al Quibla markets in Basra, Iraq. The projects were financed through the Commander's Emergency Response Program. (Photo by SSG Chrissy Best)

making condolence payments after combat operations, dispersing funds for necessary repairs resulting from combat, purchasing or repairing critical infrastructure equipment, and performing large-scale civic cleanups that employ as many local inhabitants as possible.

CERP has also become a vital capability in the commander's toolbox for stability operations. CERP has progressed to become a broader means for tactical commanders to conduct the numerous stability operations tasks related to development that traditionally have been performed by U.S., foreign, and local professional civilian personnel or agencies. These tasks include establishing civil security and control, promoting economic development, and restoring and developing essential services, governance, and infrastructure.

While the U.S. Army is uniquely trained, manned, and equipped to operate in unstable regions, it lacks the development expertise and capacity of its civilian partners in conducting these tasks. But civilian diplomatic and development agencies are often challenged to undertake such tasks in unstable areas with their traditional delivery systems.

Given these challenges, Department of Defense (DOD) policy, outlined in DOD Directive 3000.05, Military Support for Stability, Security, Transition, and Reconstruction (SSTR) Operations, directs that U.S. military forces be prepared to perform all tasks needed to establish or maintain order when civilians cannot do so. CERP is one tool the U.S. Government has provided to military commanders to meet these requirements and other theater-specific strategic objectives.

Examples of theater-level objectives for CERP include—
- ❏ Ensuring that urgent humanitarian relief and reconstruction requirements are met for the local population.
- ❏ Improving the capacity of local governments by partnering with provincial government agencies in identifying, prioritizing, selecting, and developing projects.
- ❏ Ensuring that larger, strategic projects and services are connected to the end user in local communities.
- ❏ Creating momentum and conditions for economic recovery and development.
- ❏ Empowering major subordinate command and tactical commanders, in coordination with local officials and other U.S. Government agencies, to develop and approve CERP projects consistent with theater-specific guidance, their respective funding approval authority, and budget availability.

Significance of CERP

Having been acclaimed for its effective contributions to stabilization efforts in Iraq, CERP has become both an important development in law and a potentially transforming influence on modern U.S. military operations. The significance of CERP is that, by authorizing and funding a program for discretionary humanitarian projects by brigade and division commanders, Congress has recognized the need for new tools to conduct major stability operations.

Authority to use a certain amount of operation and maintenance funds is essential to ensuring that CERP remains effective despite overlapping rules and policies that place similar authority elsewhere. Congressional acknowledgment of the need for new tools is essential because the Constitution, while it vests authority over foreign affairs and national defense in the President, vests separate, broad authority over the purse in Congress.

Since the military's conventional role of preparing for and fighting the Nation's wars continues to define defense budgets and funding mechanisms, nonconventional military operations bring into highest relief this congressional power to influence foreign affairs and national defense through the appropriations process.

As the Supreme Court has made clear, the "established rule is that the expenditure of public funds is proper only when authorized by Congress, not that public funds may be expended unless prohibited by Congress." This rule—surely a sound and proper one to safeguard the people's treasure in a constitutional democracy—requires no special supplement during peacetime training and exercises. However, during a military overseas contingency operation, the absence of congressional authority for commanders to decide on their own initiative to quickly spend small amounts of Government funds on urgent humanitarian projects

> Commander's Emergency Response Program or (CERP) funds are a relatively small piece of the war-related budgets . . . But because they can be dispensed quickly and applied directly to local needs, they have had a tremendous impact—far beyond the dollar value—on the ability of our troops to succeed in Iraq and Afghanistan. By building trust and confidence in coalition forces, these CERP projects increase the flow of intelligence to commanders in the field and help turn local Iraqis and Afghans against insurgents and terrorists.
>
> —Secretary of Defense Robert M. Gates
> Testimony to Senate Committee on Appropriations
> February 2007

can spell defeat in the struggle to persuade local populations to view U.S. intentions as friendly and enduring. By providing a source of funding for CERP, Congress has furnished such authority.

CERP's Future

There is broad agreement among military leaders that CERP's impact will continue to be profound. The Chairman of the Joint Chiefs of Staff has described CERP as one of the most effective means we have in Operation Enduring Freedom of persuading ordinary Afghanis that we are there to help them and their families.

The effectiveness of the program in the near term will require those with oversight responsibility, both within DOD and in Congress, to withstand the tendency to burden CERP with purpose-based fiscal prohibitions. Such a prohibition would be any policy statement or expression of congressional intent stating, for example, that to pay a reward or purchase a policeman's uniform or build a dam is an improper purpose for appropriated CERP funds as a matter of fiscal law.

While controls on expenditure of public funds are necessary and appropriate, CERP's positive impact will continue to stem from commanders' ability to make judgment calls quickly about how best to benefit local populations. Commanders will make these judgment calls based partly on information that, among U.S. organizations, only the military will receive, thanks to normal patrolling by Soldiers in affected communities.

Over the longer term, CERP should be made part of organic authorizing legislation and codified in title 10 of the U.S. Code. Commanders who can count on legal authority and congressional funding for CERP during a deployment will make CERP a routine part of their training program. Combat training center and institutional precommand course personnel should likewise establish a stable training program, collect lessons learned, and incorporate those lessons into leader development programs. Proactive training and leader development will provide the best control while maximizing coordinated and disciplined use of CERP without imposing the heavy hand of the Anti-Deficiency Act.

While no system of control can eliminate every ill-chosen project, division and brigade commanders will demonstrate, as they have done time and again, that the best system is one that encourages the initiative of leaders and relies on their good judgment. The unorthodox operations we undertake today have challenged our Government to provide new mechanisms within the law no less than they have challenged our Armed Forces to employ new technologies, weapons, organization, and tactics. CERP promises to be one part of an answer to these challenges and is no small change in soldiering.

Students gather at the official reopening ceremony for Agam High School in Afghanistan's Nangarhar province. The school was rehabilitated by a Marine Corps unit with $25,000 in Commander's Emergency Response Program funds. (Photo by CPT Dan Huvane, USMC)

Improving CERP Training

CENTCOM commander General David H. Petraeus, in a 23 September 2009 memo addressed to the Chief of Staff of the Army and the Commandant of the Marine Corps, identified a need to establish a CERP pre-deployment training program. The basis of the memo was "recent GAO [Government Accountability Office] and AAA [Army Audit Agency] findings [that] characterize[d] CERP training as inadequate" and found that "there is no training program at any level designed to help adequately prepare the warfighter on the proper execution of CERP prior to arrival in theater."

In response to the Petraeus memo, Headquarters, Department of the Army, published Execution Order 048–10: Pre-Deployment Training for Contracting Officers, which cites training requirements for contingency contracting, operational contract support, and CERP functional components. The Army Training and Doctrine Command was designated to deliver CERP functional training no later than 30 March 2010, and the U.S. Army Financial Management School (USAFMS) was designated as the lead for pre-deployment institutional CERP training.

Responding proactively, Terry Hancock, a USAFMS training developer, immediately deployed to both Iraq and Afghanistan to conduct interviews, observe procedures, and gather documentation to formulate an effective training strategy in support of this initiative. Based on the contacts she made, as well as the urgent need for this training, theater financial management warriors assisted in formulating and reviewing training materials to ensure that they were realistic, relevant, and reflective of current CERP execution.

The USAFMS is simultaneously addressing the distributed learning (dL) training requirement in two phases. The first phase, scheduled to be available no later than 30 March 2010, is a web-based, 16-hour dL CERP course that provides a program overview and instruction on roles, responsibilities, and processes as well as scenario-based practical exercises that require students to work through three different projects from beginning to end state. All CERP participants will complete the 16-hour dL course and receive a course completion certificate.

The second phase is a multifunctional, multitrack, 40-hour, module-based dL CERP course that addresses each stakeholder. Each participant will complete a specific track that corresponds to his particular functional area (for example, commander, resource manager, or purchasing officer). This course will be the primary pre-deployment institutional CERP training for deploying individuals and will incorporate tactics, techniques, and procedures from U.S. Forces-Iraq and U.S. Forces-Afghanistan.

The intent is to make the course available with no access restrictions (other than a common access

An Army captain helps a local child in Afghanistan use a new hand water pump provided by the Commander's Emergency Response Program.

card) via the World Wide Web or the Soldier Support Institute enterprise Blackboard domain or by CD–ROM for those with limited or no connectivity. The end state is to develop individuals who are trained through realistic, relevant, immersive, and engaging distributed learning, functionally driven by assignment, and who can ultimately achieve tactical commanders' desired strategic effects.

In addition to the efforts of the USAFMS, the Army Forces Command is in the process of developing mobile training teams that will conduct scenario-based, predeployment training for paying agents, purchasing officers, project managers, and units and commanders during rotations at the National Training Center, Joint Readiness Training Center, Battle Command Training Program, and Joint Multinational Readiness Center.

The challenge that CERP presents to commanders is to manage projects in a synchronized and disciplined manner. Coordinating CERP projects with the efforts of all individuals, teams, and units that are pursuing the same objective (inside the brigade as well as outside) will yield maximum effects per dollar spent. Focusing expenditures on the urgent humanitarian needs of the civilian populace rather than on infrastructure and security force investments will yield victories, both short and long term, in the intricate workings of hearts and minds.

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MDMP for Sustainment Units

BY MAJOR DANIEL MISIGOY

Many members of sustainment units are often uncomfortable with the military decision making process (MDMP) and do not understand its importance to the successful completion of their jobs. This article offers some suggestions to help sustainers make the MDMP work for them.

Sustainment commanders and staffs fear the military decision making process (MDMP) because they typically do not understand it. For some officers, their only exposure to the MDMP is at the schoolhouse when they attend the Combined Logistics Captains Career Course, Combined Arms and Services Staff School, and Intermediate Level Education. Likewise, noncommissioned officers (NCOs) may be exposed to the MDMP only during the Battle Staff NCO Course. Other officers and NCOs may have been exposed to the MDMP by working with a maneuver battalion or brigade staff. These experiences often lead officers and NCOs to believe that MDMP is unfeasible or irrelevant in nonmaneuver units or units that are not assigned an area of operations (AO).

The purpose of this article is to identify the differences between an MDMP for land-owning units and for units without an assigned AO. These differences should shape the unit headquarters' battle rhythm and execution of an MDMP. A commander and staff who are well versed in doctrine understand the operational framework of their missions and the MDMP and will be able to make better use of their time and resources to plan, prepare, and execute a mission.

Defining MDMP

Field Manual (FM) 5–0, Army Planning and Orders Production, defines the MDMP as follows:

> The *military decision making process* is a planning model that establishes procedures for analyzing a mission, developing, analyzing, and comparing courses of action against criteria of success and each other, selecting the optimum course of action, and producing a plan or order.

The MDMP is nothing more than the problem-solving process—the scientific method applied to military problems. It is a model for making decisions based on a large amount of information. Fundamentally, every person conducts this process in his mind for much smaller tasks. We identify a problem, consider the information at hand, consider our options, and make our decision based on what we know and what we assume will happen.

How a maneuver unit conducts its MDMP is clearly different from how other headquarters conduct their MDMPs. The greatest difference is specified tasks. Maneuver units will receive more specified tasks and purposes throughout an operation than other units. These specified tasks are clearly positioned throughout the operation and are usually addressed in the commander's intent. By contrast, a sustainment unit will typically receive one specified task: to "provide sustainment to" the supported unit. This task never changes. At most, the sustainment unit may be tasked to conduct missions in addition to sustainment, such as base defense and detainee operations. However, no further guidance is provided on the sustainment mission.

Typically, the concept of support developed by the G/S–4 and the support operations officer (SPO) during the higher headquarters' MDMP becomes the concept of operations for the sustainment unit. Therefore, part of the sustainment unit's MDMP is completed before higher headquarters issues an order. This should lead a sustainment unit to develop a directed course of action (COA) and wargame only that one COA.

Although Sun Tzu teaches us to "see the enemy, see the terrain, and see ourselves," the sustainment staff must also see the supported unit. This is a key complexity that sustainment staffs should recognize. They must also take into account friendly actions as well as enemy actions. Staffs must understand the composition, disposition, and scheme of maneuver for the supported unit and for their own units. If the sustainment staff cannot see themselves and the supported unit, the concept of support is subject to shortfalls and possible failure.

Sustainment of a major operation is usually divided into before, during, and after phases. The "before" phase typically starts with the first warning order (WARNO) or even a "be prepared to" task from the previous operation and ends before the current operation begins (units crossing the line of departure). This requires sustainment units to execute tasks as the plan is being developed in order to set the conditions for the operation.

Keys to Success

A formal and deliberate MDMP has 128 steps. A staff and commander who are knowledgeable and proficient in the MDMP can identify which steps to modify, expand, or omit. An MDMP is very relevant and necessary for sustainment units. However, because of the factors discussed in the previous section, sustainment units must modify how they conduct an MDMP. Three ways that a sustainment unit staff can maximize its time and efforts to yield a flexible, integrated plan are collaborative planning with higher headquarters, detailed and updated running estimates, and a detailed wargaming session.

Collaborative planning. Sustainment units must conduct collaborative planning with their supported units. Collaborative planning is defined in FM 5–0 as "the real-time interaction among commanders and staffs at two or more echelons developing plans for a single operation." The traditional way sustainment units execute this task is by having the SPO participate in the supported unit's MDMP. Other methods are to use a liaison officer (LNO) or for the higher headquarters' G/S–4 to provide the link between the sustainment unit and the supported unit. The method selected should be planned out and be part of the unit's standing operating procedures.

The sustainment unit staff must provide the LNO or G/S–4 with its commander's intent, updated running estimates, and the COAs they are developing. The LNO or G/S–4 must provide the sustainment unit staff with running estimates from the higher headquarters, COAs developed, the scheme of maneuver from the chosen COA, and an operational synchronization matrix with all warfighting functions. Sharing this information should be a regular part of both staffs' battle rhythms to ensure that the right information is available for the appropriate staff.

Detailed and updated running estimates. Developing and maintaining the right running estimates is crucial to collaborative planning and properly managing time. Although FM 5–0 presents a generic format for a running estimate that mirrors a staff study, the running estimate should be in a format that best conveys information that can be quickly analyzed for rapid decisionmaking. This format may be charts, tables, or spreadsheets, depending on the information. Running estimates that the sustainment unit staff should maintain and update are the—

❏ Intelligence estimate, which should mirror the higher headquarters' S–2 estimate.
❏ Supported unit and sustainment unit combat power and maintenance posture.
❏ Supported unit supply status for all classes of supply.
❏ Sustainment unit supply status of direct support stocks.

❏ Supported unit and sustainment unit personnel status.
❏ Estimated requirements for all classes of supply needed for the supported unit to execute the mission.
❏ Casualty estimate for the operation applied in time and space.

These running estimates will feed information directly to the SPO and G/S–4 as they develop the concept of support during the higher headquarters' MDMP. Detailed running estimates that are constantly updated will feed the mission analysis process. This will allow the staff to focus on the analysis and provide the commander with a clearer visualization of the operation without spending time collecting data after they receive the mission.

Wargaming. COA analysis, or wargaming, is essential to synchronizing the plan and identifying critical tasks, branches, and sequels. FM 5–0 states—

> Wargaming stimulates ideas, highlights critical tasks, and provides insights that might not otherwise be discovered. It is a critical step in the MDMP and should be allocated more time than any other step.

Ironically, sustainment units often spend the least amount of time on wargaming. The result of this is a plan that is unclear, uncoordinated, and unsynchronized. As this plan is issued down to the company level, crucial details are missing, which leads to poor situational awareness and no clear task and purpose at the squad and platoon levels. The following vignette highlights several problems.

The brigade is planning for two battalion task forces to conduct a coordinated attack on the enemy, who is occupying the three western towns in the brigade AO. The brigade support battalion (BSB) is tasked with sustaining the brigade and with being prepared to support consequence management. The BSB staff decides to execute this task by pushing a convoy with fuel, ammunition, construction materials, and medical supplies to the closest forward operating base and conducting a follow-on mission to move to the objective. The planning is conducted using a Microsoft PowerPoint slide from the brigade's concept of operations story board for the operation. Once the task organization is finalized, the BSB cuts a fragmentary order directing A Company to plan and execute a convoy and other companies to provide assets.

Since the staff did not wargame, it was unclear what the convoy's task and purpose were. They were essentially told to go to another forward operating base and wait. But what were they waiting for? No decision points, condition checks, or triggers were ever identified. Information and instructions for coordination and linkup with other units were not provided. These are

Combined Arms and Services Staff School students use the military decision making process to wargame a particular, hypothetical stability operations scenario. For many sustainment Soldiers, this type of classroom MDMP exercise is their only MDMP experience. (Photo by MAJ Christopher LeCron)

all issues that should be identified during the wargame. The consequences of an unsynchronized plan range from a shortfall in support to fratricide. It is important that key details be identified during the planning process and provided to subordinate commanders to ensure mission success.

Executing an MDMP Mission Analysis

The sustainment unit staff can start its MDMP when it receives the first WARNO from its higher or supported headquarters. In some cases, the sustainment staff can begin earlier. This requires using command, control, communications, and computer systems to provide a common operational picture of future operations and to allow LNOs to gain and pass relevant information.

The executive officer alerts the staff to gather their tools and prepare the plans tent for the MDMP at a designated time. Staff sections update their estimates before the MDMP starts. The S–3 posts in the plans tent any graphics, the operational timeline, and the initial commander's intent from the higher headquarters.

Once the staff gathers, they conduct an initial assessment based on information from the LNO, the higher headquarters' WARNO, and their running estimates. The staff identifies any initial sustainment tasks that need to be accomplished before the operation and obtains the sustainment commander's initial guidance. The staff produces a WARNO for its subordinate units. The running estimates are updated and expanded by the sustainment staff and are passed up to the higher

headquarters' G/S–4 and LNO, ensuring that the staffs share a common operational picture and that the concept of support developed is feasible, suitable, and acceptable.

Mission analysis lasts the longest of any step and will be conducted two or three times. The sustainment staff continues doing mission analysis until the higher headquarters has completed its wargame and issued WARNO3. However, this does not mean the staff stays in the plans tent throughout. As the higher headquarters completes an MDMP step, the staff receives a WARNO and information from the LNO. The three cycles of mission analysis for the sustainment staff are:
❑ Mission analysis brief (WARNO2).
❑ COA development.
❑ Wargaming (WARNO3).

Mission Analysis Brief

As the staff executes the cycles of mission analysis, they update their running estimates, identifying specified and implied tasks, critical facts and assumptions, constraints, required versus available assets, and information requirements. At the end of each cycle, they informally brief the commander, issue a fragmentary order to subordinates with immediate tasks, and provide updated running estimates to the LNO and G/S–4. At the end of mission analysis, the staff provides a formal briefing to the commander and the subordinate unit commanders. Subordinate commanders are included in order to facilitate parallel planning and so they can receive the commander's intent when the staff receives it.

COA Development

COA development for the sustainment staff begins when the higher headquarters completes its wargame and issues WARNO3. The sustainment staff conducts a focused COA development since the framework for the COA was already developed by the G/S–4 during higher headquarters' MDMP. The concept of operations for the sustainment unit is based on the concept of support developed by the G/S–4. This makes COA development for the sustainment staff a relatively easy process. The sustainment staff still needs to develop specified tasks, assign them to subordinate headquarters, and develop a COA statement and sketch. The end state is a COA brief to the commander and subordinate commanders for approval.

Wargaming

Once the commander has approved the COA, the staff must conduct a detailed COA analysis, or wargame. This is arguably the most important MDMP step. Wargaming allows the staff to synchronize the plan both internally and externally. External synchronization is crucial since their subordinate units will operate in another unit's AO and will likely traverse

multiple units' AOs. According to FM 5–0, COA analysis enables the staff to—
❑ Further visualize the battle.
❑ Determine conditions and resources required for success.
❑ Identify the coordination needed to produce synchronized results.

In addition to the process for wargaming described in FM 5–0, the staff takes steps to tailor the wargame to their requirements. First, the staff obtains the higher headquarters' operational synchronization matrix and record of its wargame. The critical events wargamed by the sustainment staff are nested with the critical events of their higher headquarters. In some cases, these critical events may need to be divided into two critical events for the sustainment staff.

The higher headquarters' synchronization matrix also tells the staff what adjacent units and enablers are expected to do over space and time. This should be incorporated into the wargame by expanding the cycles for each critical event. One cycle includes—
❑ Action by the maneuver unit and enablers.
❑ Action by the sustainment unit.
❑ Reaction (enemy action on the sustainment unit primarily and other units as needed).
❑ Counteraction by the maneuver unit and enablers.
❑ Counteraction by the sustainment unit.

As the staff completes each cycle, it visualizes the battle in order to identify additional implied tasks, decision points, and required coordination. The staff completes its operational synchronization matrix and updates the sustainment synchronization matrix for the G/S–4. The result of the wargame is a suitable, feasible, and complete concept of the operations that identifies required coordination and rehearsals with adjacent units and is ready to be published in an operation order for subordinates.

The MDMP is an invaluable tool for any staff. Sustainment units can use the techniques described in this article to streamline and focus their planning and rapidly process information. The process uses a linear planning timeline driven by higher headquarters' MDMPs. The next step for the sustainment staff is to nest their planning process in their higher headquarters' targeting cycle. By maximizing the use of an LNO, maintaining detailed running estimates, and executing a detailed wargame, the staff will be able to better manage time and information, which will lead to greater productivity.

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The 16th Sustainment Brigade in Iraq: Supporting the Drawdown

BY COLONEL MARTIN B. PITTS AND LIEUTENANT COLONEL ROBERT S. MOTT

The "Knight Warriors" faced the challenge of supporting operations in the transition from the surge to the drawdown.

As the surge of U.S. forces in Iraq that had begun in 2007 was winding down during the latter half of 2008, the "Knight Warriors" of the Bamberg, Germany-based 16th Sustainment Brigade began assuming responsibility for sustainment operations in Multi-National Division-North from their counterparts of the 3d Sustainment Brigade. These operations were conducted at Contingency Operating Base (COB) Qayyarah West (Q-West) and other forward operating bases stretching from the Iraq-Turkey border at Habur Gate to Joint Base Balad (formerly Logistics Support Area Anaconda).

Although the surge proved to be a clear success in Baghdad and Al Anbar Province, the cities of Mosul and Kirkuk remained hot spots for enemy activity. Providing sustainment to coalition forces in and around Mosul and Kirkuk required well-trained, disciplined, and tactically patient leaders and convoy escort teams at all levels.

Share the Road

The end of the surge brought with it major changes in how sustainment forces accomplished their missions. One of these changes was the "Share the Road" concept for executing convoys, which was introduced at this time by Multi-National Corps-Iraq (MNC–I). (See related article on page 23.) This initiative was an effort to bring a sense of normal operations back to the roads of Iraq. Coalition forces convoys were instructed not to "own the road," which meant that they had to cease some of the convoy practices they had used in the past, such as driving down the center of the road and making oncoming traffic move to the side of the road and stop.

Other tactics, techniques, and procedures that coalition forces convoys had implemented over the years and ceased during the drawdown included setting up hasty traffic control points whenever convoys had to turn onto a different route, operating convoys in a "bubble" by not allowing civilian traffic within 500 feet of a coalition forces convoy, and hanging "Stay Back; Deadly Force Authorized" signs on gun trucks.

Under the Share the Road initiative, the signs were removed, civilian vehicles were allowed to mingle with coalition forces convoys, and convoys began operating predominantly at night to avoid adding to congested civilian traffic. The 16th Sustainment Brigade successfully implemented Share the Road across the brigade's footprint, except within Mosul, where the persistent enemy threat required stricter measures to maintain convoy security.

Logistics Training and Advisory Teams

It was around this same time that MNC–I began a renewed effort to assist the Iraqi Security Forces (ISF) in training their logistics units. U.S. Army divisions and the 3d Expeditionary Sustainment Command (ESC) directed the formation of logistics training and advisory teams (LTATs). The LTATs began a deliberate training process for Iraqi maintenance companies at the organizational, division, location command, and depot levels.

The 16th Sustainment Brigade was directed to immediately stand up two LTATs, one at K–1 (Kirkuk) and one at Al Kasik, with an on-order mission to stand up two more. Although MNC–I had a recommended LTAT structure model, the composition of the 16th Sustainment Brigade's LTATs focused on subject-matter experts and trainers; the LTATs therefore had more warrant officers and noncommissioned officers than commissioned officers. As an example of the LTATs' success, by the end of the brigade's deployment, the Iraqi repair maintenance company (RMC) at K–1 had received an award from the Iraqi Army Director of Electrical and Mechanical Engineering for being the top RMC in Iraq.

Combat Patrols Versus Convoys

While the 16th Sustainment Brigade was in the process of implementing Share the Road and standing up LTATs, the U.S. and Iraqi Governments signed the new bilateral security agreement. The agreement required combat patrols to be partnered with ISF at all times. Before the security agreement, sustainment convoys had been called "combat logistics patrols," or "CLPs," for several years. So if a "CLP" was a form of combat patrol, then it had to have an Iraqi escort, even though the security agreement stipulated that logistics convoys were not required to have ISF escorts.

Subsequently, on 1 January 2009, the 16th Sustainment Brigade stopped using the term "CLP" and substituted "convoy" in order to ensure that sustainment convoys were operating within the terms of the security agreement. This change proved to be quite challeng-

ing because "CLP" had a warrior connotation and "convoy" seemed to indicate a garrison mentality. Eventually, the ESC would publish a policy letter on using the term "convoy" in place of "CLP" to demonstrate that the change in terminology had general-officer command emphasis.

Increased Iraqi Responsibility

The 16th Sustainment Brigade had approximately 6 months before the next step in implementing the security agreement came into effect to get used to the renewed emphasis on returning Iraq to normal conditions and working through Iraqi Security Forces. That step called for all coalition forces to be out of Iraqi cities by 30 June 2009. This new benchmark on the road to full Iraqi sovereignty brought even greater challenges to the task of coordinating the movement of convoys through the city of Mosul.

ISF and the Ninewa Operations Command felt empowered and confident that they could rid the city of Mosul of violent extremists with minimal assistance from coalition forces. Consequently, to remain consistent with the message of their information operations campaign—that coalition forces were not operating within the city—the ISF only allowed coalition forces sustainment convoys a daily 4-hour window to move through the city limits of Mosul. The 4-hour movement window caused the 16th Sustainment Brigade to increase its coordination efforts with local battlespace owners.

Human Resources and Finance

Despite the flux in the operating environment, the deployment afforded the 16th Sustainment Brigade a great opportunity to synchronize human resources and financial management functions among the brigade, the support operations office (SPO), and the special troops battalion (STB). Following sustainment brigade doctrine, these functions were effectively managed by the SPO and commanded and controlled by the STB. This relationship should be the template for both combat deployments and garrison operations.

The 16th Sustainment Brigade SPO was able to build and monitor numerous convoys that relocated excess equipment from northern Iraq to southern Iraq for eventual shipment out of the theater. The brigade's efforts to clear the central receiving and shipping point yards of excess equipment in northern Iraq will eventually lead to a seamless and efficient redeployment of Soldiers and equipment from the Joint Iraqi Operational Area. That, in turn, will allow the new advise and assist brigades to

The commander of the 16th Sustainment Brigade and a local Iraqi community leader discuss the security situation in the community and at Contingency Operating Base Q-West in the village of Jaddilah Soflih, Iraq. (Photo by SFC Adam V. Shaw, 16th Sustainment Brigade PAO)

focus on ISF training and transition and not just on retrograde logistics.

During its 15-month rotation in Iraq, the 16th Sustainment Brigade played an integral role in laying the foundation for the responsible drawdown of forces over the next 2½ years. With the brigade acting as the mayor of the Habur Gate border-crossing site, the brigade's planners were in a position to provide detailed information on infrastructure and other data requirements for strategic logistics planning efforts. As the senior mission command of COB Q-West, the brigade also was able to provide valuable information on the infrastructure and operational intricacies of the COB; this information will support the COB's (planned) future expanded responsibilities as coalition forces shift to a posture of strategic overwatch.

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Fuel Support at Contingency Operating Base Speicher

BY LIEUTENANT COLONEL VINCENT C. NWAFOR, SERGEANT FIRST CLASS THOMAS E. HARRELL, JR., AND STAFF SERGEANT PAULA MILLER

Soldiers at Contingency Operating Base (COB) Speicher in Iraq and across Multi-National Division-North (MND–N) received the fuel support they needed during Operation Iraqi Freedom 08–10 thanks to the positive leadership and concerted efforts of the 16th Sustainment Brigade's 391st Combat Sustainment Support Battalion (CSSB) and the 3d Expeditionary Sustainment Command (ESC).

Convoys from COB Speicher provided food, water, ammunition, and other classes of supply to Army units throughout the region. Fuel for those convoys and for other operations was available when and where it was needed. The Soldiers from the 391st CSSB ensured continuity in fuel operations at Speicher by using a synchronized fuel support network, skillful maintenance of consumption factors, and optimum onsite fuel storage capacity.

Synchronized Fuel Support

The support to COB Speicher was possible because of the 3d ESC's synchronized fuel support network. The 3d ESC was responsible for managing all strategic fuel sources coming into the Iraqi theater of operations. Among these sources was the northern ground line of communication coming from Habur Gate at the Iraq-Turkey border; this line primarily supported COB Speicher. The ESC also was responsible for theater fuel stockage at direct support and general support fuel sites. The 3d ESC influenced daily fuel operations by publishing 96-hour fuel distribution requests, which dictated each fuel site's fuel "push" or "pull" supply operations.

As an essential link in the fuel support network, the 16th Sustainment Brigade, a subordinate element of the 3d ESC, was responsible for the fuel flow from Habur Gate to direct support and general support fuel sites for MND–N. The brigade resupplied those fuel sites based on the daily petroleum reports provided by subordinate battalions.

Soldiers from the 391st CSSB were responsible for fuel operations at COB Speicher. By working together, the units of the 3d ESC fuel support network ensured responsive fuel flow and the best fuel stockage.

Consumption Factors and Storage Capacity

Fuel flowed from Habur Gate to the COB Speicher fuel farm daily. No middleman was involved in the throughput. Foreign national fuel tankers escorted by the brigade's convoy protection vehicles delivered the fuel. The ideal turnaround time for these fuel tankers was 72 hours. The status of the fuel tankers was briefed at the battalion, brigade, and ESC levels. These briefings demonstrated command interest in fuel supply operations and constituted one of the reasons that fuel support at COB Speicher was readily available and responsive.

Accurate maintenance of consumption factors and optimum onsite fuel storage capacity were critical to achieving successful fuel support to COB Speicher. The 3d ESC used a quarterly consumption factor; based on the consumption factor, Speicher's fuel farm stockage objective was set at 7 days of supply. The 391st CSSB's experience showed that maintaining 7 days of supply offered no built-in buffer to accommodate any disruptions in the resupply line or other exigencies, such as bad weather, which were part and parcel of the operational environment. The risk was mitigated by making storage capacity many times greater than the stockage objective, which allowed actual fuel stockage to be well above 7 days of supply. Speicher benefited from the fuel stockpile concept.

The 391st CSSB's constant coordination with all parties involved was important to successful fuel support. The battalion's collaborative efforts with division elements fostered anticipatory support. The CSSB "leaned forward" and delivered bulk fuel to the brigade support battalion's satellite locations and provided dedicated fuel support to the aviation support battalion. The CSSB's coordination with the Marines to provide retail fuel support to their ground assault convoys passing through the base was particularly satisfying.

The CSSB's vertical coordination with the 16th Sustainment Brigade and the 3d ESC was pivotal in helping the fuel farm to provide and receive backup resupply to and from the Joint Base Balad general support fuel site. During Operation Iraqi Freedom 08–10, the CSSB's fuel team did what it did best: it coordinated with higher headquarters and supporting units to provide fuel when and where customers wanted it.

The Fuel Farm

COB Speicher fuel operations featured a fuel farm and a retail fuel point, both operated by contractors. KBR's Corps Logistics Support Services conducted

3d Expeditionary Sustainment Command
Manages all strategic fuel sources into ITO. Manages theater fuel stockage. Generates 96-hour DS/GS fuel distribution request.

16th Sustainment Brigade
Manages fuel resupply from strategic source to DS sites at MND–N. Resupplies or redistributes fuel among its subordinate battalions.

391st CSSB
Coordinates, synchronizes, and manages COB Speicher fuel support operations.

Bulk Fuel Farm Support
Retail fuel point resupply. BSB satellite locations push. ASB pull. JBB pull.

Retail Fuel Point Support
COB Speicher tenant customers. Convoy support center.

BSB and ASB
Provide fuel requirements to 391st CSSB.

Legend
ASB = Aviation support battalion
BSB = Brigade support battalion
COB = Contingency operating base
CSSB = Combat sustainment support battalion
DS = Direct support
GS = General support
ITO = Iraqi theater of operations
JBB = Joint Base Balad
MND–N = Multi-National Division-North

COB Speicher Fuel Support Model

The COB Speicher fuel support model shows the cooperative management that was the basis for successful fuel operations.

the fuel operations, and KBR's Theater Transportation Mission distributed the fuel. The fuel farm and retail point each had its own workforce of a handful of expatriates overseeing subcontractors. These contractor employees received fuel tankers, downloaded the fuel, processed receipts, made issues, accounted for the fuel, and maintained the facilities.

Day-to-day fuel facility operations rested on the backs of the subcontractor workers. The COB Speicher fuel farm and retail fuel facilities worked like a Swiss clock; they were under one manager, the command climate was amiable and conducive to seamless operations, and cross-talks between the fuel farm workers and retail operators were regular.

Retail fuel replenishment was also provided on a regular basis. About half of the retail fuel issued daily went to onpost mobile refueling (topping off generators and materials-handling equipment). The other half was issued in support of motor transport in and around the base and to convoys passing through. Although the retail fuel daily consumption ratio was about the same as the retail fuel storage capacity, the facility never ran

out of fuel. The retail fuel point had local-haul tankers on standby and made replenishment runs as needed; this practice provided another safety valve that ensured success in fuel support operations.

It should be mentioned that fuel operations became capitalized under the 391st CSSB's leadership. Capitalization meant that the bulk fuel inventory was transferred from Army to Defense Energy Support Center (DESC) ownership. As a capitalized site, bulk fuel issued to non-Army units was charged to the military service of the respective user. Before the capitalization, the cost of bulk fuel issues was absorbed by the Army.

The fuel farm operated under stringent DESC rules. The fuel farm employees captured all the bulk fuel transactions (receipt and issue) with related temperature conversion readings and entered the resulting data into the web-based Fuels Automated System Enterprise Server. The Fuels Automated System Enterprise Server is an automated information system designed to support DESC and the services in performing their responsibilities in fuel management and distribution.

Inputting the data from fuel inventory strapping charts was a significant part of the daily tasks. [According to DODM 4140.25, DOD Management of Bulk Petroleum Products, Natural Gas, and Coal, tank "strapping is the term commonly applied to the procedure for measuring tanks to provide the dimensions necessary for computing capacity tables that will reflect the quantity of product in a tank at any given depth/level."] The COB Spiecher fuel farm can proudly say that it met the DESC standards during Operation Iraqi Freedom 08–10.

Contract Management Structure

Because the 391st CSSB had tasking authority over the contractors, the battalion was ultimately accountable for all fuel support operations at COB Speicher. The battalion personnel who were actively immersed in the day-to-day fuel operations included the responsible officer (RO), the commodity manager, and the contracting officer's representative (COR).

The RO, a qualified senior petroleum supply specialist, provided oversight of COB Speicher's capitalized fuel-farm Defense Working Capital Fund account. The RO accepted accountability and assumed related pecuniary liability. The RO determined and verified who drew fuel and ensured that the fuel facility maintained an audit trail for all fuel transactions in accordance with DESC petroleum management policies and procedures. The RO's goal was to keep the fuel farm's inventory in tolerance at the end of each month, and that goal was achieved. [Tolerance is the acceptable level of deviation from a standard.]

The commodity manager, a petroleum supply sergeant, managed the daily functions of fuel support operations. Those functions included—

❏ Acknowledging receipts of fuel resupply and sending confirmation receipts to DESC-Europe to allow the fuel supplier to be paid.
❏ Monitoring bulk petroleum equipment readiness.
❏ Providing technical assistance and guidance to contractor employees.
❏ Conducting onsite inspections and audits.
❏ Analyzing fuel reports.
❏ Projecting current and future mission requirements based on the consumption factor and stockage objective.
❏ Transmitting the data to the 16th Sustainment Brigade, which allowed the brigade to make timely and informed decisions that kept the fuel farm sufficiently resupplied.

The commodity manager served as the COR. In that capacity, the sergeant ensured contractor compliance with the performance work statement. While the COR monitored contractor performance daily, formal feedback to the contractor was provided through monthly audit and program evaluation briefs.

The 391st CSSB's relationship with the contractors was one of mutual interest: both were dedicated to providing successful fuel support. Frankly, the COB Speicher fuel support model was a product of positive leadership—all elements working with a common goal to get the customers the fuel they wanted.

The battalion's success contradicts a famous statement from General Norman H. Schwarzkopf, the commander of Operations Desert Shield and Desert Storm from 1990 to 1991: "You learn far more from negative leadership than from positive leadership, because you learn how not to do it. And, therefore, you learn how to do it." The positive leadership and unity of effort seen in the COB Speicher fuel support model provided an invaluable learning experience on how to manage and distribute fuel to a base.

If the famous World War II German commander Field Marshal Erwin Rommel, known as the "Desert Fox," had had access to a fuel support network, the chronic fuel shortages that plagued the Germans in North Africa might not have happened and "military supply failures" might not have become part of our historical lexicon. Poor communication between Rommel and his logistics staff has been cited as a factor in the Germans' logistics problems.

In the COB Speicher fuel support model, a synchronized fuel support network was in place, open lines of communication flourished between the supported and supporting units, mutual interest ensured successful support between military and civilians, and customers got fuel when and where they needed it.

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Share the Road: Convoy Escort

by Major Kris A. Kough, CAARNG, and Captain Curtis A. Goller III, CAARNG

For the first few years of Operation Iraqi Freedom, the heightened security posture on the roads of Iraq led coalition forces to adopt aggressive convoy tactics, techniques, and procedures (TTP). Coalition forces "owned" the roads. Simply put, convoys did not share the roads with Iraqis.

As tactical situations dictated, patrol or convoy commanders instructed their units to drive against the flow—cross into oncoming traffic and drive against traffic—or to drive over medians. Units maintained "bubbles," preventing civilian traffic from intermingling with coalition forces. Civilian vehicles entering a convoy's bubble were considered hostile. Another typical coalition practice was speeding or forcing military vehicles through traffic. These were common practices throughout most of the Iraq theater of operations until the end of 2008. Unfortunately, injury and death of civilians resulted from the aggressive nature of these practices that were intended to protect coalition forces.

> Share the Road is the right step to take in order for Iraqi society to move forward.

Declining attacks led Multi-National Corps-Iraq (MNC–I) leaders to believe that it was time to lower the overall security posture of their forces on the roads throughout the theater. On 1 October 2008, MNC–I instituted the "Share the Road" initiative, which was started just before the security agreement between the United States and Iraq took effect on 1 January 2009. Coalition and Iraqi forces expect this initiative to result in a return to normalcy. On the main and alternate supply routes, Share the Road results in greater civilian freedom of movement and a smaller coalition force footprint. This initiative is believed to be integral to the ultimate goal of successfully giving control of Iraq back to the Iraqi people.

Share the Road Rules

To successfully return the roads to the Iraqis, coalition forces have to change their TTP. Share the Road is one of the methods used to make that change. Some of the rules of this initiative include—

❏ Travel in the right lane when feasible and allow civilian traffic to pass from the front and rear.

❏ Traffic may intermingle with a convoy in the process of passing but should not be allowed to linger in or alongside the convoy. It must show a progressive attempt to exit or move forward.

❏ Convoys will not prevent the natural flow of traffic or force traffic to stop unless specific circumstances or safety concerns dictate doing so.

❏ Convoys will not clear paths that are not intended for normal traffic flow unless an emergency situation exists or the mission requires.

❏ Consider all vehicles friendly until proven otherwise.

❏ Continuous situational awareness and vigilance is necessary because of some Iraqis' erratic driving practices. Soldiers must make measured decisions and execute tactical patience when considering escalation of force.

❏ Coalition forces may not have "Stay Back" signs on their vehicles, including the "Danger: Stay Back 100 Meters" and all similar signs.

❏ Units are permitted to have signs that state "When Signaled, Proceed and Pass With Caution."

❏ Convoys can flow with traffic and are expected to obey all traffic rules unless an emergency dictates otherwise.

Under this new philosophy, civilian vehicles can travel with convoys and are considered friendly until determined otherwise. This change requires a total shift in thinking on the part of coalition forces, much more so than on the part of the Iraqi people. However, these guidelines do not take away a Soldier's inherent right to self-defense. If a potential threat exists, escalation of force procedures should be initiated to determine hostile intent or action.

Problems With Sharing the Road

Share the Road is the right step to take in order for Iraqi society to move forward. It shows the Iraqis that we care about their well-being and want them to take responsibility for the security and safety of their roads and country. Although Share the Road is the way forward, this initiative cannot be applied to all coalition force missions.

Convoy security companies escorting military and civilian convoys in a Share the Road environment encounter many complex challenges. These challenges fall in two basic areas: coalition force security and Iraqi civilian safety. For example, a typical combat patrol (4 to 5 vehicles) can easily share the road while maintaining positive command and control of its elements. However, a logistics convoy escorting military

A convoy travels along Main Supply Route Tampa in Iraq. Note the condition of the road and the shoulder of the road.

vehicles, KBR elements, or third-country nationals (up to 50 trucks) is extremely difficult to execute safely while sharing the road.

With smaller, nonlogistics convoys, one can maintain command and control visually and with radio communications while civilian traffic moves throughout the element. This patrol may only span a couple of hundred meters. Because of the size of the unit, vehicle commanders have better situational awareness, making reaction time shorter.

However, the situation changes drastically when the number of vehicles in the convoy increases greatly (as with logistics convoys). Convoy security companies escort logistics convoys of up to 50 vehicles that frequently span a distance of more than 5 kilometers. This creates many security and command and control problems. With only 6 gun trucks, it is difficult to secure a large convoy of 40 to 50 trucks. When a convoy is stretched out, gun trucks more than likely will not have a view of the other gun trucks, thus making overlapping security for the convoy difficult. The security element has positive control at the front and rear of the convoy, where attacks are most likely to occur, but civilian vehicles may enter the convoy at any time from the sides without the security element's knowledge.

Security Risks

Iraq's roads are not in the best condition. Many are unstable from potholes, erosion, improvised explosive device (IED) detonations, and frequent digging (which is

an indicator of future IED emplacement). The shoulders of the roads are also very dangerous because of erosion or tampering and digging. Under Share the Road, convoys are directed to stay to the side of the road so civilians may pass. Unfortunately, the side of the road is where most IED attacks occur.

Another security problem for convoys is proper execution of escalation of force. With the Share the Road initiative, we eliminate the existing safe standoff distance between coalition force and civilian vehicles, thus eliminating the distance and time a Soldier has to distinguish between an innocent bystander and an individual with hostile intent or one initiating a hostile act. We spend many hours training on escalation of force and the rules of engagement, yet we have reduced the time he has to make life or death decisions.

Vehicles are permitted to approach the convoys and pass when directed, moving in and out of the convoy at their leisure. Once a vehicle has entered the convoy, gun trucks may not be able to see this vehicle because of their placement within the convoy. Theoretically, a vehicle could hide in the convoy and travel with it. During our deployment to Iraq in 2008 and 2009, we encountered vehicles employing this tactic. Surprisingly, we also found that civilian trucks entered our convoys in order to travel under the protection of our gun trucks.

Erratic driving habits of civilians can also create security problems since gunners on coalition force

> Most logistics convoys travel at night where the highways are not lit, and drivers are always fearful of being attacked at any moment.

vehicles may not be able to distinguish between aggressive driving while attempting to pass and hostile intent or the initiation of a hostile act.

Civilian Safety

In addition to the safety of coalition forces and the security risks we accept while executing this initiative, we must examine Share the Road by looking at the

After conducting over 1,200 missions and traveling almost a million miles, our task force did not have a single accident involving Iraqi civilians.

risk to civilian safety. The roads that coalition forces and Iraqis share are in poor condition and in desperate need of repair. They are very narrow, which makes them difficult for wide trucks to navigate.

Iraqi Security Force checkpoints along the main roads channel traffic into fewer lanes every couple of miles. Many third-country national drivers come from all over the Middle East and Turkey. This means that those drivers have different levels of driver's training, vehicle maintenance requirements, and licensing procedures. Some drivers have little or no experience driving big rigs.

Most logistics convoys travel at night where the highways are not lit, and drivers are always fearful of being attacked at any moment. During our mission in Iraq, we encountered many third-country national accidents caused by drivers falling asleep at the wheel, faulty brakes, and miscellaneous maintenance breakdowns. Many of these incidents could have been catastrophic if civilians had been intermingling with the logistics convoys.

The erratic driving behavior of some civilians, combined with that of the third-country national truckdrivers, increases the number of accidents. The second- and third-order effects of this include—

❏ Slower convoy times as the security elements of the convoys respond to accidents.
❏ Reduced availability of quick reaction forces that must respond to civilian accidents.
❏ Increased demands for recovery assets because of increased IED detonations.
❏ Increased demand for air and ground medical evacuation because of accidents and IED detonations.

Attempting to pass a 50-vehicle convoy is not a wise decision in either Iraq or the United States. Finally, when considering the conditions of the roads and the driving habits and training of third-country-national drivers and civilians, the safest decision is to avoid large convoys and trucks at all costs.

Mitigating Security and Safety Concerns

Convoy security companies have attempted to mitigate the challenges of Share the Road by implementing various TTP. They have been instructed to install red strobe lights on lead and trail vehicles to provide Iraqis with a signal to pass. Traffic integrates with convoys in some instances, such as maintenance and emergency halts and smaller convoys. When convoys are halted on the side of the road and vehicles are not seen as a threat, they are waved by the last gun truck. Information is passed to the forward gun truck so that it can monitor civilian vehicles passing the halted convoy.

On the other hand, when convoys are halted for possible or actual IEDs, traffic is halted in both lanes. This is not to impede the Iraqis' right to use the roads but to ensure their safety until the situation is dealt with appropriately.

When a civilian vehicle wants to pass a smaller convoy and the driver does not appear to be threatening, it is allowed to pass. The convoy monitors its movement and ensures that it continues to move until it clears the front of the convoy. Civilian vehicles are not allowed to meander within the convoys. This TTP tends to work with smaller convoys, where command and control and security can maintain "eyes on" the passing vehicle.

Although difficult at times, convoy security companies continue to improve their TTP to meet the spirit of the Share the Road policy.

After conducting over 1,200 missions and traveling almost a million miles, our task force did not have a single accident involving Iraqi civilians. It accomplished this remarkable goal while maintaining an appropriate security posture and respecting the Iraqi people's right to have safe freedom of movement on their roads. Share the Road is the way ahead, and it works for smaller patrols. However, too many uncontrollable variables make it a daunting task for a 50-vehicle logistics convoy.

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LandWarNet :
Is Your IT Workforce Ready?

BY CHIEF WARRANT OFFICER (W–3) DANNIE WALTERS

When someone in your unit inadvertently erases the entire battalion operations database, would you prefer to request restoration of the database from the Department of Defense (DOD) enterprise help desk, which is operated by a DOD employee or contractor miles away, or from your own resident information technology (IT) personnel? Most would prefer someone on site. So how can your unit continue to maintain an effective IT workforce? This article explores changes in the network, identifies some of the challenges units are facing, and offers some suggestions on how to prepare your IT workforce.

LandWarNet is the Army's part of the DOD IT infrastructure that enables operational forces to "reach back" for information in the form of high-definition intelligence products, voice, video, and figures. Since LandWarNet's inception in February 2004, its growth has spiraled, tackling one milestone at a time.

One crucial milestone was to prepare the workforce responsible for the inner workings of the operation. As specified in DOD Directive (DODD) 8570.1, Information Assurance Training, Certification, and Workforce Management Directive, DOD devised a 5-year plan to upgrade its workforce "with the knowledge, skills and tools to effectively prevent, deter, and respond to threats against DOD information, information systems, and information infrastructures." In short, DOD requires its IT workforce to have and sustain commercial IT industry standard certifications.

So how does that apply to your unit? With Land-WarNet, a unit needs more than an appointment letter, familiarization training, and on-the-job training to have access privileges. Today, you have to meet all the new requirements specified in DODD 8570.1 if you want to have an effective IT workforce that can meet your unit's IT demands. Otherwise, your unit must rely heavily on outside sources to meet its communication and automation needs.

More IT Products

What has changed in the Army's network? One immediate change is that computers, collaborative suites (such as Adobe NetMeeting and Microsoft Breeze), and Army Battle Command System (ABCS) equipment are available in all units from the brigade to the company level.

LandWarNet delivers services directly to the warfighters. Because of this increased capability, the number of IT products to manage has increased exponentially. From the perspective of those on the ground, the amount of new products and services seems overwhelming. During my tour in Operation Iraqi Freedom (OIF) 08–10 with the 16th Sustainment Brigade, at least two dozen programs were introduced to either the Army or brigade- and battalion-level units.

Modularity is one of the reasons for the increase in the number of IT products at the brigade and battalion levels. To keep up with all the changes that modularity presents, a unit should document them. As easy as that sounds, many units go through the toil of research and other bureaucratic steps to fix a problem or install a service but fail to document their solutions. During our tour, we could have saved a lot of time if we had used a spreadsheet of port numbers and other specifications to help us describe the new systems to the network administrator responsible for configuring the firewall.

Another reason for the increase in IT products is the Army's effort to procure commercial off-the-shelf equipment that applies the concept of "everything over Internet protocol (EOIP)." This concept has brought an avalanche of new products, such as voice over IP telephones, video over IP, video teleconference (VTC) suites over IP, and even radio over IP products. To its credit, the Army has chosen, as part of its strategic goals, to replace many of the old proprietary systems with comparable EOIP equipment that is easier to install and manage and complements an emerging broadband-data-capable world.

EOIP equipment presents a few challenges to brigades and battalions. Units used to have total control over most of the systems mentioned above. Most electronics now have IP addresses. In the past, equipment like VTC suites, secure telephone equipment (STE), and conference calling equipment just needed an active telephone line to operate. Today, LandWarNet provides the same services but with a subtle price: a unit does not have total control over the product. The unit cannot relocate its VTC suite to the conference room downstairs or move a secure telephone to another area without calling the network service center (NSC) to make the necessary changes to allow this to happen. In contrast, STE could be moved with the approval of the unit's security manager.

Another big change is that a unit does not own its portion of the network. This includes its organic signal assets. Gone are the days when a unit could bring its own equipment, set it up according to its standing operating procedures, and then contract for services to a local strategic entry point (STEP) or tunnel through another Internet service provider (ISP) for access to the larger network. LandWarNet's goal is to "develop and maintain a secure, seamless, interdependent LandWarNet network by leading development and enforcing the use of integrated enterprise architecture." This is a difficult concept for units to accept, but just like the equipment, Soldiers must also evolve. Units must move their focus from owning the equipment to understanding that they are part of a larger network with the shared risk and vulnerabilities associated with the digital world.

> By seeking solutions jointly and sharing the work, an organization and its NSC can create a working relationship that can ultimately benefit signal Soldiers and their customers.

Enterprise Architecture

I deployed to Iraq in support of OIF 08–10 with the 16th Special Troops Battalion, 16th Sustainment Brigade. It was my second time deploying to this region, and the way we managed the network was at times extremely different from the first time. As we sat around the table for our first contingency operating base (COB) S–6 meeting, the first thing I noticed was that this was not an all-Army network. Being a product of the mobile subscriber equipment (MSE) days, I was used to fielding our own Army-driven network. This time, we shared the network with DOD civilians and service members from other branches and this entity called the "enterprise."

Although the enterprise was not a person, we talked about it a lot as we all came to grips with the reality of the new enterprise architecture. The issue of who did what—ownership—also frequently entered our conversations. To figure out ownership, most people need a reference point: the Army does it this way, or the Air Force this way. So which way is right? The framers of the LandWarNet concept anticipated this situation and opted for a centralized approach through the NSCs. As most units that have deployed are finding out, they are not in charge of the network or even their part of the network, although they can negotiate many of the terms.

So What Do Signal Soldiers Do?

I would be less than truthful in saying that we had a lot of IT work to do during our OIF 08–10 deployment. The NSC did most of the work for us. We spent our time trying to avoid duplication of effort. This was frustrating to a lot of the signal Soldiers, but it was an unfortunate side effect of change. We are undoubtedly heading in the right direction despite the drastic decline in IT work at the unit level.

Managers on the ground should establish memorandums of agreement to share the work and give the trained pools of Soldiers the opportunity to participate and excel in group projects.

A good time to share the workload is when there is a surge in personnel and extra labor is needed to prepare computers, improve the wiring of a building, or install communications equipment in a new building. In a deployed location, many jobs could be assigned to signal Soldiers to keep them proficient in their skills. Units should communicate what resources they have and offer them to their NSC. By seeking solutions jointly and sharing the work, an organization and its NSC can create a working relationship that can ultimately benefit signal Soldiers and their customers.

Our brigade S–6 section (especially the noncommissioned officers), in coordination with our COB NSC, did a great job of rewiring, documenting, and installing new services to buildings on the COB. No one told them to do it; they did it to provide services to the warfighter. Improvements were seen all over the COB, and lessons learned were used to help design the internal infrastructure of new buildings.

Obtaining Certification

As DOD specifies, and as Soldiers of units that have returned from the war zone have found out, no one is exempt from the IT workforce requirements. All personnel who support the global information grid must meet the certification requirements.

The good news is that the Army and DOD have many resources for supporting Soldier certification efforts. During our deployment, we found that trying to get certified is time consuming and challenging. Both our Soldiers and training managers were busy preparing themselves through various methods. Some Soldiers enrolled in IT programs offered by colleges and universities. Others used self-study methods to prepare for their certifications. During the deployment, my unit purchased IT study kits, started a testing center, and formed study groups to help those who wanted assistance with their self-study efforts.

Starting a test center was easier than I thought, although on occasion we had to call the technical assistance desk for help. Fortunately, they were helpful and patient enough to assist us in establishing our authorized

test center. Eventually, we got our test center up and running. Most of the personnel who used the facility appreciated having a test center on the COB. The alternative would have been to travel to another COB, which in some cases would have removed personnel from their primary jobs for several days or even weeks. At the beginning, about six individuals took the test and 50 percent passed. Although this was not bad, we immediately started to find ways to improve the pass rate, such as establishing study groups.

During our tour, we hosted 4 study groups, which amounted to about 40 students who would come to our afterwork classes 3 days a week. We called these study groups instead of instructional classes because we did not have certified instructors to teach Computing Technology Industry Association (CompTIA) Network+, CompTIA Security+, or other classes. The percentage of those passing the certification test improved slightly but not enough.

We ordered training materials from Carnegie Mellon University, which provides DODD 8570.1 training. Although their classes are delivered via the Web, in our bandwidth-challenged environment the courses often took a long time to download, which was distracting for students.We contacted Carnegie Mellon University, and they provided us with the same course content on a DVD. With their permission, we duplicated the DVD for more than 124 personnel.

Many of our Soldiers thought the DVDs were a great source of information that gave them a "hands on approach" when participating in demonstrations and labs (also included on the DVD). Most appreciated having an actual instructor giving them a lecture on the subject instead of just reading it out of a study kit. With the DVDs, we received the preparatory courses on Computer Technology Industry Association (CompTIA) Network+, CompTIA Security+, Cisco Certified Network Associate, and even Certified Information System Security Professional. If students purchased the same comparable instructional DVDs in the commercial market, they would pay more than $5,000.

Making the IT Workforce Successful

How can a unit posture its IT workforce to succeed in accordance with DOD 8570.1–M, Information Assurance Workforce Improvement Program? Thanks to the input I received from other warrant officers and other IT professionals, I offer these suggestions:

❏ Survey your IT infrastructure, add the training required to manage your IT assets (such as boot camps and official courseware), and remember that this is an annual requirement.
❏ Keep up with the efforts of the Signal Center and the Army Training and Doctrine Command, and adjust your training plans accordingly.

❏ Find the DODD 8570.1 training being offered in your region. If you do not know where to ask, then try your servicing NSC for help.
❏ Become familiar with DOD and Army Information Assurance best practices and incorporate them into your training plans and SOPs.
❏ Appoint a training manager for your IT workforce.
❏ Your training manager should register all of his workforce through the Army Training and Certification website.
❏ Counsel the members of your workforce on the training requirements for their duty position, set a deadline to get the training completed, and hold them accountable.
❏ Request free vouchers from your unit or training NCO for your Soldiers and DOD civilians.
❏ Notify your direct reporting unit or Army command of your IT workforce posture, and work out a streamlined agreement for managing your own subunit. (Remember to present your proposal as a win-win situation, and ensure that you work together as one team to operate, maintain, and protect the network.)
❏ Establish a working relationship with a good IT certification training program. (You may be able to work with other units, piggyback on their training, and learn from their challenges.)
❏ Locate a test center nearby so that you can arrange for your Soldiers to test when they are ready.
❏ Recruit local talent from your IT workforce or from Reserve Component Soldiers who may be qualified to provide such training in their civilian jobs.
❏ Invest in IT self-study certification kits, which will not only serve as ready-reference material for your IT personnel but will also provide material for those who have the desire to study on their own.

Lieutenant General Jeffrey A. Sorenson, the Department of the Army G–6, has observed, "Because the Army is moving to a modular, expeditionary force, LandWarNet must follow suit and become more streamlined through an enterprise structure. The Army plans to achieve that goal with the use of the network service centers, which federate networks and creates a seamless network wherever a Soldier is." While these changes bring great advantages, they can leave sustainment units feeling that they have lost a level of control over their communications. The solution is to train the IT workforce to operate in the new environment.

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Paying Agents:
The Good, the Bad, and the Ugly

by Major Bill Keltner

Paying agents in Iraq have recently been scrutinized for mishandling Department of Defense funds. This article recounts some of those cases and provides lessons learned from the 16th Sustainment Brigade's investigations into major losses of funds.

There is an old saying, "A fool and his money are soon parted." After recent news reports of illegal activities by some unscrupulous Army paying agents (PAs) in Iraq, perhaps a new adage is at hand: "A dummy and his dinar are soon damned." As the financial cost of Operation Iraqi Freedom approaches the cost of the Vietnam War, billions of dollars have been entrusted to PAs.

The financial management support operations section (FM SPO) of the 16th Sustainment Brigade was responsible for the operational oversight of around 300 PAs in northern Iraq while the brigade was deployed from July 2008 through October 2009. Those PAs were funded over $125 million in fiscal year 2009 to pay for procurement and services deemed vital to support the war effort.

PAs in the News

It would appear that the press has lifted an infested carpet to reveal maladroit embezzlers who are scrambling out like cockroaches. According to the press, there has been a "wave of prosecutions emerging from the tangled and expensive reconstruction in Iraq and Afghanistan," as Kim Murphy reports in the *Los Angeles Times* article, "Some U.S. troops tempted by reconstruction cash" (12 April 2009).

Murphy goes on to say, "The Justice Department has secured more than three dozen bribery-related convictions in the awarding of reconstruction contracts; at least 25 theft probes are underway." The article describes how an Army captain in Iraq managed to skim almost $700,000 in cash from reconstruction projects and payments to a private Iraqi security force known as the Sons of Iraq. The captain is "accused of packing cash into boxes and mailing them to his family's home." All

the while, his leaders believed he was making great contributions to the war effort.

Not all the news is bad. In his 5 June 2008 story entitled, "Mountain Brook, Alabama officer is planner, paymaster in Iraq," Tom Gordon of *The Birmingham News* posted a positive story about a lieutenant, another PA in Iraq, who used money to improve a village's economic structure and its attitude toward the coalition. However, this same lieutenant was investigated after he incurred a major loss of funds. So are PAs heroes who accomplish a mission that is vital to success in Iraq? Or are they actually a bunch of scoundrels robbing us blind? The truth is not always cut and dried.

Roles and Responsibilities of a PA

Let us start our journey for truth by taking a look at PA duties according to the procedures in Multi-National Corps-Iraq's standing operating procedure, Money as a Weapon System, and Field Manual 1–06, Financial Management Operations. PAs are appointed by a field-grade officer in their chain of command. They represent financial management company (FMCo) commanders, who disburse cash to them through the company's disbursing agents to pay for crucial wartime requirements. The servicing FMCo trains PAs on all requirements for drawing and safeguarding funds and clearing accounts.

Before drawing funds, PAs must sign statements acknowledging that they understand their duties and accept pecuniary liability for those funds if they have a loss. PAs are not authorized to delegate their responsibilities. A PA must also follow the instructions of either the project purchasing officer (PPO) or field ordering officer (FOO) who represents the contracting office, directs the PA to draw funds, and approves all purchases.

> Critical support missions can be halted by PA losses. These losses equate not only to lost funding for the Army but also to lost man-hours as investigating officers must be summoned to conduct a month-long investigation.

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PAs must not commingle any funds, public or private. And, very importantly, PAs must secure funds as specified in chapter 3 of the Department of Defense Financial Management Regulation (DOD-FMR), Volume 5. This means that if the funds are not in the PA's physical possession, they must be secured in an approved safe to which only the PA has the combination.

Critical support missions can be halted by PA losses. These losses equate not only to lost funding for the Army but also to lost man-hours as investigating officers must be summoned to conduct a month-long investigation.

Investigations of Major Losses of Funds

The 16th Sustainment Brigade's FM SPO oversaw five investigations into circumstances involving major losses of funds. (A major loss is a loss of $750 or more.) Most of these investigations determined that the losses were caused by carelessness. The investigations also sometimes revealed deeper problems of fraud, waste, and abuse.

One loss of $4,580.43 was discovered when a disbursing agent attempted to clear a PA's account. The PA maintained that he had already turned his money in several months earlier to a previous disbursing agent, who had cleared him and then redeployed. However, the PA kept no copy of the Department of Defense Form 1081, Statement of Agent Officer's Account, which would have served as proof of his clearing the account. It did not help matters that the next disbursing agent waited over 4 months to clear the PA. By the time the investigation was requested, the previous disbursing agent was no longer in the Army.

In another situation, $1,000 was lost because a disbursing agent who was covering for another disbursing agent on rest and relaxation (R&R) leave funded the wrong PA to make a $1,000 reward payment. This PA failed to pay attention to the emailed instructions of his PPO, who told the PA not to make the payment. The PA claimed that after receiving the funds, he asked around, found the awardee, and paid him. Later, the other disbursing agent came back from R&R, but no reconciliation had been done. Consequently, this disbursing agent funded the correct PA, who also paid the awardee, thus creating a dual payment.

Another loss of $17,498.69 was reported and investigated because a PA was unable to obtain the documentation needed to clear his account during an ongoing investigation into the questionable practices of his FOO. The Defense Finance and Accounting Service (DFAS), which is responsible for gathering evidence and determining liability for losses, later released the PA from liability but held the FOO liable for the lost funds.

Another case involved a PA losing $9,087.87 because he commingled funds and delegated author-ity to others to make payments. He also did not follow established timelines requiring him to clear his account every 30 days. His clearing took place 111 days after he drew funds, and he did not maintain a ledger.

The lieutenant who was mentioned favorably in *The Birmingham News* was ironically also the subject of a major loss of funds investigation. He was doing great work as a PA funding Sons of Iraq, who are former Sunni insurgents who provide security services and have been credited with helping calm violence in the country. However, he lost $14,366.96. How? He did not use a safe.

The investigation revealed that the lost currency had been in an assault pack on a chair inside his living quarters and, incredibly, that he left his quarters unlocked. He claimed that one of the unit's interpreters may have stolen the money while the funds were unsecured. Clearly, this officer did not properly secure the funds entrusted to him.

The PA later produced a witness who claimed that the PA had asked his command, not once, but several times for a safe. In light of this witness's statement, DFAS concluded that the proximate cause of the loss was not that he had left the funds unsecured in his unlocked quarters but that his commander had not provided him a safe, as should have been done in accordance with the DODFMR.

As of this writing, it appears the lost funds will not be recovered. The PA probably will not have to pay back the lost money, and DFAS is leaning toward holding his commander to blame. However, while the legal wheels slowly turned and allowed new witness testimony for the defense, the PA's commander redeployed. Regardless, commanders do not hold pecuniary liability for PA funds in any case.

However, not having a safe was just the tip of the iceberg of financial mismanagement by this PA's unit. Another fact discovered during the investigation was that the PA's unit did not call the military police after the money was allegedly stolen. Later, the same unit incurred a major loss of funds by another PA.

To top that off, this second PA claimed his unit's leaders had directed him to shift funds from approved contracts to pay the Sons of Iraq, which was not properly authorized. The leaders claimed the Sons of Iraq was crucial to the security of their troops, and the investigator conducting the commander's inquiry recommended that all parties be only counseled.

Fixing the Problems

To help prevent losses, the 16th Sustainment Brigade FM SPO, the 101st FMCo, the 469th Financial Management Center (FMC), and the 18th FMC initiated programs to help PAs. For instance, the FM SPO began making staff assistance visits to the PAs' locations. These visits allowed the FM SPO to share lessons learned and to see if PAs were following proper safeguarding procedures by securing funds according to the DODFMR. They also provided opportunities to find out if any pressure

was being put on PAs to make improper purchases. Staff assistance visits and inspections were fundamental to improving the PAs' success.

The site assistance visits revealed that many PAs were not storing funds properly. In one instance, a PA was storing funds in a filing cabinet. In another, a PA had several thousands of dollars in a toy safe that could easily have been carried away. These discoveries of non-compliance with safeguarding procedures prompted the FM SPO to submit an update to Money as a Weapon System to warn unit commanders that they may be subject to adverse administrative action if funds are lost because of negligence.

To prevent dual payments, the 101st FMCo established a database for disbursing agents to use in tracking payments. Now procedures require that newly assigned disbursing agents make contact with all their PAs to further ensure accountability of funds.

The 469th FMC and the 18th FMC implemented e-Commerce initiatives to remove cash from the battlefield and build confidence in local financial institutions. One such initiative was a pilot program for the use of limited depository accounts at Iraqi banks so that PAs may write checks instead of carrying cash. Further decreasing the need for cash on the battlefield, the FMCo now processes contracts that require mostly electronic transactions as the method of payment.

The PA clearing policy was also changed after a PA was killed by a roadside bomb while traveling to clear his account. The policy now allows PAs to clear via email if they do not have any cash to turn in or pick up.

To further assist PAs, sustainment brigade commanders should use their special troops battalions (STBs) for support in overseeing PA operations. The STB can be tasked to provide personnel, equipment, and transportation coordination to support a robust staff assistance visit program. This would help to ensure that PAs are properly safeguarding funds, especially at locations where the STB already has administrative control over financial management units. The STB commander could task the FMCo commander to ensure that disbursing agents within their financial management detachments take time to periodically visit PAs located at their contingency operating bases.

Improving financial management on the battlefield even further, a new, enhanced PA training program that incorporates lessons learned is underway in Iraq. Also, the 469th FMC is in charge of planning and executing this year's Diamond Saber exercise, which is the Army's premier annual financial management training exercise. The exercise provides realistic training for FM warriors of all components and will assist in their preparation for deployment to theaters of operations. This year, all sustainment brigade FM SPOs were invited to attend Diamond Saber at Fort McCoy, Wisconsin, from 6 to 19 June.

Any loss of funds captures our attention, and incorporating lessons learned into training reduces the likelihood they will happen again. The losses mentioned above are the exception, and as bad as losses are, things have not exactly gone to pieces. Almost 300 PAs in northern Iraq are currently doing a great job spending hundreds of millions of dollars in their efforts to fund crucial mission requirements. Strides are being taken to assist the unsung heroes who risk their lives in dangerous territories as they provide critical support and security for our troops.

One disbursing agent described the truly outstanding accomplishments of the PAs working in his area in this way:

> As PAs for Sons of Iraq and the Commanders' Emergency Relief Program, they assumed responsibility for nine Sons of Iraq contracts and a large literacy program. They each disbursed around $1,000,000 as they worked closely with the [disbursing agent] to ensure the correct denominations of Iraqi dinar were requested and on hand. During their watch, the program progressed from paying the Sheiks directly by lump sum to conducting payday activities where each individual Sons of Iraq contractor was paid by the PA. Their work as PAs saved lives and improved the living conditions in their area of operations.

Perhaps there are a few bad apples in the bunch. But truthfully, the Army's PAs are outstanding heroes who sustain the warfighter by helping commanders use money as a weapon system and as a nonlethal means to achieve victory on the battlefield.

Major Bill Keltner serves as the chief of training and operations for the 469th Financial Management Center. He was the chief of financial management operations for the 16th Sustainment Brigade during its 15-month deployment in Iraq. He holds an undergraduate degree in English from the University of South Alabama and is a graduate of the Adjutant General Officer Basic and Advanced Courses, the Planning, Programming, Budgeting, and Execution Systems Course, and the Combined Arms and Services Staff School.

Logistics Support in an Austere Environment: The Mission to Sinjar

BY CAPTAIN JACK A. TYER, TNARNG

The mission of the U.S. Marine Corps at Sahl-Sinjar (referred to as Sinjar) may well be one of the unsung success stories of Operation Iraqi Freedom. Set up to prevent weapons from entering Iraq from Syria, the mission was originally intended to be one of short duration. Because of their initial success in blocking access from the Sinjar Mountains, their long patrol range, and their rapid strike capabilities, the Marines' mission was quickly extended from 90 days to "to be determined."

The 30th Combat Sustainment Support Battalion (CSSB), located at Qayyarah-West (Q-West), became aware of the Marine's mission in September 2008. The support operations service and support officer in charge immediately began work on his unit's concept of support to supplement the operation, which was to begin the following month.

Already tasked with a heavy operating tempo in a general support role for Multi-National Division-North at Q-West, the 30th CSSB, under the 16th Sustainment Brigade, supported northern Iraq— about 20,000 square miles—with freight, food, and fuel. The addition of the direct support mission for the Marines required the 30th CSSB to respond directly to the needs of the unit at Sinjar. This was a departure from its regular method of operation.

Providing Support

The vicinity of Sinjar is as desolate as one could imagine. The Marine Corps has a reputation for selecting austere locations to set up operations, and their base camp was an example of this tendency. The Marines set up camp with no permanent buildings within their enclave. In fact, the base camp's only permanent construction was the airstrip and taxiway. The exterior of the Marine camp's perimeter and all of the protective barriers were pushed up earth, which would have been T-walled concrete and Hesco barriers in a permanent camp.

The Marines moved into Sinjar and set up shop in late October 2008. Their living and office spaces were tents. Because of the austerity of the operating environment, they had to bring everything they needed for the operation from Al Asad and Taqqadum, including an expeditionary airfield control tower. The Marines provided mail distribution and disbursement services from 20-foot containers.

As an example of the expeditionary spirit present at Sinjar, all of the electrical wiring was installed by Marine electrician journeymen from the 1st Marine Logistics Group. The unit constructed sanitary facilities with plywood and 55-gallon drums cut in half to contain waste. The disposal of said waste involved the judicious application of JP8 and a torch. With no public works and no contractors present, the Marines took care of business "the old-fashioned way."

The 30th CSSB's sustainment consisted of food and water, fuel, and emergency repair parts. With a tentative plan for support in place, the 30th CSSB selected the 51st Transportation Company to provide security for the first mission on 3 November 2008. Escorting the 353d Transportation Company to Sinjar, the convoy carried 98,000 gallons of JP8, 2,000 gallons of bulk water, and 5 days of supply of both food and bottled water.

The concept for movement was as simple as it was efficient. With Forward Operating Base (FOB)

A contract carrier resupplies bulk water for use in the laundry and shower facilities.

Sykes halfway between Q-West and Sinjar, the Soldiers of the 30th CSSB would travel to FOB Sykes and remain overnight. (The city of Tal Afar lay between Q-West and FOB Sykes. The daytime traffic congestion in Tal Afar had long been a source of delay, with daytime traffic capable of lengthening a 3½-hour drive to as much as 9 hours.) They would push out from FOB Sykes to Sinjar early on the second day, deliver the payload, and return to FOB Sykes for another overnight before returning to Q-West.

While the Marine unit was moving to Sinjar, the 371st Sustainment Brigade at Al Asad was shipping a shower, laundry, and clothing repair (SLCR) team to Sinjar via Q-West. In an interbrigade movement between the 371st Sustainment Brigade and the 16th Sustainment Brigade, which was also located at Q-West, the SLCR unit was picked up at Joint Base Balad and shuttled out to FOB Sykes to await movement to Sinjar when the Marines were ready to install it.

The first convoy left Q-West on 3 November and arrived at Sinjar the next day without incident. With the first convoy successfully completed, the Marines and Soldiers began to work together to build a successful relationship.

Correcting Deficiencies

One of the first glaring deficiencies was in the estimate for class I (subsistence). The original estimate for unit group rations (UGRs) submitted to the 16th Sustainment Brigade by the 2d Marine Expeditionary Force called for many more UGRs than the Marines could use. Because the Marines had no field kitchen in camp and were constantly at outposts or on patrol, they used three times as many meals ready-to-eat (MREs) as originally requested, and the UGRs sat mostly unused. While the

Armored forklifts unload palletized water that was delivered by armored tractors.

Expeditionary forces are protected by built-up earth berms.

Marines consumed mostly MREs and some UGR–Es (express), which are self-heating and self-contained rations that feed 18 troops, the Soldiers of the 30th CSSB worked to restore a balance in the ration cycle. Ultimately, the 30th CSSB provided eight containers for class I storage and the Marines set up a field kitchen at the Sinjar camp.

Bulk fuel was another initial issue of concern to both parties. The 30th CSSB was pushing 98,000 gallons of JP8 and was initially informed that this was the base's maximum fuel-storage capacity; however, the Marines were actually able to store much more. With two fuel-issue points set up, one for aviation and one for ground vehicles, their potential fuel consumption rates were also greater than originally assessed.

With their two key sustainment resources in a state of disarray, the Marines and the 30th CSSB realized they needed a liaison officer (LNO) in place to reduce the chance for any miscommunication. Late in November 2008, a Marine gunnery sergeant went to Q-West to act as the LNO. Immediately, the Army and Marine units began to work together better.

Making Deliveries

Setting up a resupply cycle of two deliveries a week, the 30th CSSB pushed out from Q-West on Mondays and Fridays, delivering to Sinjar on Tuesdays and Saturdays. With bottled water and rations coming from Q-West, the 30th CSSB picked up an average of 30,000 gallons of bulk water at FOB Sykes using KBR assets and transported it with the resupply mission. This provided fresh water for the SLCR team, which had set up both showers and laundry facilities for camp support.

Soon after the LNO arrived, the 30th CSSB began shipping ration supplements to Sinjar to augment field rations. This was a milestone for the Marines in the field. The addition of an occasional cold soda, bag of chips, and snack cake or honeybun improved the variety of the Marines' diet considerably.

With the initial operational success of the Marines' presence, the operation at Sinjar quickly expanded and was extended. Originally numbering 2,100, the Marines' headcount swelled to almost 3,300, and their end of mission went from "90 days" to "to be determined." This troop surge forced the 30th CSSB to reevaluate its support strategy.

Although they are housed in tents, the food service and laundry and shower facilities are greatly appreciated by the Marine personnel.

Now, already using military haul assets from the 353d Transportation Company, the 30th CSSB tasked the 51st Transportation Company and the 497th Transportation Company to provide haul assets and placed a forward logistics element from the 497th Transportation Company on the ground at FOB Sykes to increase responsiveness to the mission.

With a self-supporting element now only 3 hours from Sinjar, the 30th CSSB could shuttle its supplies straight to FOB Sykes and the forward logistics element could send them on with any last-minute adjustments. In this way, the 30th CSSB could "push" a little heavy to FOB Sykes and have some flexibility in case the Marines' requirements increased.

Having established some sense of civility, despite the desolate conditions, the Marines next looked at further improving their position, including setting up a field kitchen. The 30th CSSB increased its capability for transporting refrigerated food and delivered fresh fruits and vegetables to complement the upgraded rations that the Marines prepared in their fully functional field kitchen.

After 5 months of challenges and successes, the Marines and the 30th CSSB had produced fruitful results by working together. By the end of March 2009, the 30th CSSB had shipped 1,748,000 gallons of JP8, 64,260 cases of bottled water, and over 32,000 cases of MREs and UGRs to Sinjar.

Following this continued track record of support to a barren, desolate area, the Marines at Sinjar received a steady supply of classes I, IIIB (bulk petroleum, oils, and lubricants), and when needed, emergency class IX (repair parts).

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Resourcing and Training a Level III Logistics Training and Advisory Team

BY LIEUTENANT COLONEL CARLOS E. LOPEZ

Sustainment brigades and combat sustainment support battalions (CSSBs) deploying to Operation Iraqi Freedom must be prepared to assume a variety of missions. One mission these units must be ready for is a partnership with Iraqi logistics third-line (level III) units, which the U.S. Army refers to as direct support units. This article is intended to help sustainment units understand what is required to train, resource, and prepare for the level III logistics training and advisory team (LTAT) mission.

Sustainment brigades and CSSBs provide the necessary qualified personnel to train and advise the Iraqi Army (IA) as they transition to a self-sustaining logistics force. Helping third-line IA logistics units to operate more effectively and professionally remains a challenge that requires full understanding of level III logistics procedures and policies as well as familiarization with other levels of IA logistics units and their partnered coalition units. Sustainment unit personnel must have cultural awareness to help Iraqis achieve the desired self-reliant IA logistics posture.

The Objective of Self-Sufficiency

As U.S. forces continue to reduce their presence in Iraq, the possibility of a stable Iraq depends heavily on the ability of the Iraqi Security Forces (ISF) to be self-reliant and capable of sustaining their forces without excessive coalition oversight. The objective of self-sufficiency is the main goal of U.S. and coalition logistics partnering.

In 2005, the Iraqi Assistance Group (IAG) was created as part of the Multi-National Security Transition Command-Iraq (MNSTC–I) to serve as a coordinating agency between Iraqi combined working groups and Multi-National Corps-Iraq. IAG has provided behind-the-scenes support to military transition teams and partnering units as they help to build forward ISF capability, allowing the Iraqis to adapt and lead their efforts in a changing operational environment. This training and assistance partnering brought early improvements to the IA's four levels of logistics sustainment and distribution.

Despite the coalition's steady emphasis, progress toward self-sufficiency has been a struggle for Iraqi partner units. Iraqi logisticians still lack discipline in adhering to established processes and depend on coalition forces to help promote success. A single standardized Iraqi logistics system is far from being a reality; what can be accomplished easily in one IA division can be a challenge in another.

Now and in the near future, the deployed expeditionary sustainment commands (ESCs) in Iraq must emphasize the professional development, training, and progress of the repair maintenance companies (RMCs) that operate in the 13 IA location commands (LOCOMs), which provide direct support to brigade-and-below IA units. An RMC's mission can best be equated to that of a U.S. Army direct support maintenance facility or supply support activity. The sustainment brigades and CSSBs training these level III units will be challenged by the anticipated reduction in resources and fewer U.S. capabilities in the theater. ESCs, the sustainment brigades' higher headquarters, will continue to partner and synchronize level III capabilities with other levels of coalition logistics partner units to ensure that a strong and self-reliant Iraqi sustainment network remains relevant and capable to support ISF demands.

The goal of ESCs and their subordinate commands is to reach an "overwatch" phase (also known as "partnering with purpose"), in which third-line LTATs assume a less active role while providing regular advice and feedback to their IA partnering units. LTATs facilitate this by attending review and analysis meetings to ensure that coordination is available among all levels. During the overwatch phase, third-line LTATs should be prepared to support the RMCs if support to ISF is severely interrupted.

Accurately assessing the progress of Iraqi self-sufficiency is a challenge. Many reporting channels exist through the various chains of command and the different levels of coalition partnership. Other units training and advising IA units, such as brigade support battalions (BSBs) and military transition teams that support levels I and II operations, report to their tactical partners and IAG.

A logistics military advisory team (LMAT) is another type of partnering unit that helps train and advise the IA LOCOMs. LMATs report through MNSTC–I channels, and the sustainment brigade LTATs report to ESCs. Sometimes the units report different perspectives of the Iraqis' self-sufficiency. This

could be alleviated by making the LMATs the sole reporting authority for measuring the progress of Iraqi logistics self-sufficiency in IA divisions. BSBs would provide customer input to LMATs, LTATs would report the Iraqis' direct support capabilities, and the LMATs would analyze the information and consolidate it into one report.

Sustainment brigade commanders work specific issues to improve the overall performance of RMCs by personally conducting key leader engagements with third-line IA leadership. The RMCs' progress and capability assessments are reported to the ESC commander through weekly and monthly reports and scheduled periodic LTAT reviews. The sustainment brigade ISF cell is responsible for coordinating actions between the ESC ISF cell and the LTATs, as well as planning key leader engagements for the sustainment brigade commander.

> A single standardized Iraqi logistics system is far from being a reality; what can be accomplished easily in one IA division can be a challenge in another.

Preparing for the LTAT Mission

During the predeployment training phase, sustainment brigade and CSSB commanders can prepare their staffs and subordinate units to better understand the task organizations, command and control, and support relationships among coalition forces and IA units. Sustainment brigade and CSSB commanders should also coordinate with the deployed units that they will replace in theater to identify any unique issues in resourcing and training that their LTAT will be responsible for managing.

Before deploying, CSSBs should identify specific military occupational specialties (MOSs) and key leaders needed for the LTAT mission. The organization of each LTAT is unique and must be tailored to partner with its assigned IA RMC.

Under normal conditions, a third-line LTAT is led by a company-grade officer (or an experienced warrant officer) and two experienced noncommissioned officers (NCOs). Depending on the task organization of the RMC, some LTATs are organized with an additional NCO who serves as the team NCO-in-charge. Soldiers with additional skill sets are routinely sent to an LTAT to provide reachback capability and to support specific training requirements planned by the LMATs and LOCOM.

Examples of reachback MOS capabilities that a CSSB should consider during mission analysis to support RMCs include transportation, ammunition, fuel, small-arms repair, and power generation repair. One officer from the CSSB staff should be assigned the responsibility to coordinate and synchronize requirements among the LTAT, sustainment brigade, and ESC ISF cells.

The relationship between the LTAT and the LMAT must remain strong, synchronized, and ready to achieve the overall training objectives that support the LOCOM.

LTAT Responsibilities

A third-line LTAT is responsible for training and advising RMCs in maintenance, supply, and distribution tasks. These training tasks are assigned by the ESCs to the sustainment brigades and help the LTATs to remain proficient in training and advising the RMCs that support IA divisions. The tasks are critical in assisting third-line IA logisticians to sustain the tactical and strategic levels of the ISF lines of operations.

Maintenance. Maintenance tasks include repair to IA vehicle power trains, differentials, and wiring. Maintenance training must also include welding, body work, and painting. The maintenance focus must be on all repairs that take more than 36 man-hours to complete. Jobs that require more than 72 hours are evacuated to level IV.

Supply. Supply tasks include class IX (repair parts) supply and support activities. RMCs must attain a baseline understanding of how to issue, store, receive, and process parts. Once an understanding of class IX parts is achieved, training tasks will expand to other classes of supply.

Distribution. Distribution includes levels I and II motorized transportation regiment (MTR) distribution capabilities and level IV general transportation regiment distribution capabilities. The RMC, without organic transportation, must have a solid understanding of how to monitor and track the flow of parts and equipment to and from all levels of organizations.

Understanding the Iraqi Army

Sustainment brigade level III LTATs must understand Iraqi culture, doctrine, and processes to develop IA leaders and ensure key operational logistics success. Each RMC is unique and responds differently based on the area of operations, regional atmosphere, and personality of individual IA commanders. Each training and advisory team is uniquely organized to provide training that is tailored to sustain IA organizations within their assigned area of operations. The ESC coordinates the training of all sustainment brigade LTAT personnel and their leaders through IAG channels.

Iraqi Army Logistics Structure

Strategic	Operational	Tactical	
Level IV Depot Level	**Level III** Location Command Repair Maintenance Company Level	**Level II** Division Level	**Level I** Unit Level
U.S. equivalent: Army Materiel Command and Defense Logistics Agency	U.S. partner unit: Combat sustainment support battalion level III logistics training and advisory team	U.S. partner unit: Brigade support battalion level II logistics training and advisory team	U.S. partner unit: Military transition team
Fourth-line maintenance and repair parts support is performed at the Taji National Depot, shipbuilding facilities, contracted aircraft-specific facilities, or other contracted facilities. These organizations are the highest level of maintenance support within the Iraqi Army logistics system and are responsible for heavy-grade maintenance support.	Third-line maintenance and repair parts support is established at each of the location commands and other locations to meet operational requirements. These organizations are responsible for medium-grade repairs, including replacement of major assemblies and modules.	Second-line maintenance and repair parts support is performed by the motor transportation regiment (MTR) maintenance company. Field workshops will soon replace MTRs as the second line of maintenance support for divisions. MTRs will only provide first-line maintenance support for division headquarters and separate brigades. MTRs will continue to provide second-line support for all other classes of supply.	First-line maintenance and repair parts support is principally performed by maintenance platoons in the headquarters and services company at the unit and brigade levels, where light-grade repairs are conducted. Equipment operators, including vehicle drivers, are also allowed to perform limited operator maintenance on the equipment.

The Phoenix Academy offers LTATs and other personnel supporting the ISF a 6-day course that covers many important topics, including Arabic, the history of Iraq, ISF organizations and their functions, IA logistics practices, and LTAT partnering. The course also includes an overview and terrain walk of the Taji National Depot. These and other main topics are designed to give LTATs and other ISF supporting teams the necessary institutional knowledge to begin their mission support to IA logistics training.

LTATs must understand the flow of support used by IA units. LTATs do not fix problems for their partner units, but they encourage them to discover by learning while teaching them to trust their system, which is essential to acquiring institutional knowledge and promoting learning. Again, the goal of a level III LTAT is to minimize hands-on participation and to move to an overwatch position. LTATs should not try to convince the Iraqis to change their system; they should encourage them to learn the methods chosen by the Iraqi Ministry of Defense. LTATs and other transition teams should assist by reinforcing the IA methods.

Logistics Technology

A lack of interactive software programs for requesting, tracking, and integrating supplies limits the IA's logistics capabilities and their prospects for developing an efficient logistics infrastructure with strong networks. The IA Maintenance Program (IAMP) is a database used to track requisitions and allows Iraqi logisticians to locally manage maintenance work orders and repair parts requests. The IAMP is not a stand-alone system and lacks interactive software for self-tutoring. The program was developed in English (the Arabic version is now available) and is a web-based program that uses Microsoft SQL.

The IAMP requires data to be manually entered into the IA 101 universal supply requisition form, which is used to request, track, and receive supplies. Once the information is recorded and all signatures are obtained on the form, the information is transferred into the IAMP. The program can take a long time to operate since it requires the user to go in and out of different areas to gather the desired information.

Although IA combat units have improved tactically and operationally, their support capabilities have not

fully matured into an efficient system that can significantly extend uninterrupted combat operations. The self-reliance of IA logistics will take time and depends greatly on the interest that Iraqis have in the process. Most Iraqi leaders and their units demonstrate the right skills to take up and embrace new systems.

The system used to manage logistics is not streamlined and depends on many hands to make it work proficiently and ethically. Using the IA 101 universal supply requisition form is a stringent paper-based method that requires many days for one single request to make it through the bureaucratic levels of IA commands. This system requires patience and aggressive management skills from IA logisticians.

Up to this point, Iraqis have shown little patience and trust in using the IAMP, and not trusting the system can lead to counterproductive practices. Some Iraqi leaders have chosen to circumvent the system. For example, it is easier for IA logisticians to find a repair part in downtown Kirkuk, Iraq, than to get the last signature required to complete the IA 101 form and effectively coordinate transportation to receive the part.

LTAT Scenarios

Deploying sustainment brigades and CSSBs should start LTAT training at home station. These units can contact the outgoing units to gather as many details as possible about their upcoming missions. They can use the feedback to plan how to work through common practices or any specific challenges their future partner unit might face. The feedback can be used to create training scenarios for mission rehearsal exercises and give sustainment brigade and CSSB commanders and staffs the basic understanding they need to prepare for their upcoming missions.

The following scenarios are based on observations and experiences gathered by 16th Sustainment Brigade third-line LTATs. These vignettes are intended to help illustrate some of the challenges Iraqis face in their quest for self-reliance. What might work for one RMC in one LOCOM simply will not work in another area. Some IA soldiers have difficulty visualizing a nationwide-army concept—a system that is interconnected and dependent on outside influences to make it work. An IA soldier's tribal background and allegiance to his regional beliefs may affect the way he interprets how this indistinct system will provide for his or his unit's welfare.

Scenario 1. An IA division in northern Iraq is receiving an inadequate resupply of repair parts at a LOCOM. The IA division does not have valid requisitions in the IAMP system. In the past, third-line units were allowed to submit requests for prescribed load list (PLL) stock. Last year, the Director of Electrical and Mechanical Engineering (EME) published a new policy that stated that units could no longer request parts for stock at any level. This policy change made most of the requisitions that were already in the system invalid.

Many of the requests are old and no longer required because the parts were purchased on the economy before IA units began receiving parts. Some requests for brake pads, for example, have been in the system for over 300 days.

None of the requests in the IAMP system contain vehicle chassis numbers. Since the unit name is listed by battalion, but not by chassis number, it is nearly impossible to ensure that parts will arrive where needed. When the paper-copy IA 101s are scrubbed against what is listed in the system, the information does not match up by chassis number, date, or item requested.

Recommendation. The unit should continue to work with the MTR to ensure that it is correctly submitting IA 101s to the LOCOM. Level II LMATs and LTATs should continue to provide feedback to their Iraqi counterparts to ensure that when the MTR submits an IA 101 to level III, the MTR keeps copies of the requests on file to ensure they receive a copy of the form that is generated when a request is entered into the IAMP or operations database. Once the requests are in the system, the MTR maintenance company must track all opened requisitions and follow up with the third-line RMC to get statuses for those parts requests.

IA unit leaders must keep track of parts requests because their commanders and maintenance officers from the IA division are not required to explain the status of parts requests through higher echelons. This is directly linked to maintenance management. All invalid requests in the IAMP system should be purged. This will help alleviate the backlog in the system.

The level III RMC manages the availability of stocks and submits regular requests for spare parts to EME for first- and second-line maintenance by vehicle type in the IA fleet. These spare parts are needed at each maintenance activity to avoid depleting their stock levels.

Scenario 2. IA commanders and staff officers do not place adequate emphasis on maintenance management within the division. A unit has not followed correct formats or properly conducted weekly or monthly maintenance meetings, despite efforts by LMAT and LTAT members to get them to stick to agendas. This lack of focus on maintenance management leaves the IA division's commanding general and his staff without a fair assessment of maintenance and class IX issues. Subordinate commanders and staff officers in this command are not being held responsible for the maintenance program in their units. This has proven to have a negative impact on the division's overall readiness.

Recommendation. The G–4 adviser, MTR maintenance adviser, LMAT, and LTAT must advise their counterparts of the consequences of not having an efficient maintenance program. Leaders should ensure that their meetings have set formats and follow agendas. This will help prioritize information and help the commanding general's staff coordinate actions, allowing them to run an effective and efficient maintenance program. The IA commanding general must be prebriefed on all maintenance-related issues so that he is prepared to ask the right questions during the meetings.

IA leaders must conduct maintenance meetings every month, not every other month. They should also use weekly maintenance meetings to review recurring jobs and to track the details on those jobs that cannot be closed. Unfinished jobs must be briefed during the monthly meetings.

> FOR THE IA TO TRANSITION INTO A SELF-RELIANT AND COMPETENT ARMY, ITS LOGISTICIANS MUST CONTINUE TO LEARN, ADAPT, AND GAIN NECESSARY TRAINING EXPERIENCES FROM LEVEL III LTATs AND OTHER TRANSITION TEAMS ASSISTING IN THEIR PROFESSIONAL DEVELOPMENT.

Scenario 3. IA personnel have little trust in the Iraqi logistics system. The system's processes are not streamlined and do not always provide results. It is often much easier to buy the parts off the shelf.

An MTR team recently started working on an IA 101 packet to request three vehicle batteries from the third line. It has taken over 2 weeks to get all the required documents (including two original IA 101s for each battery and the paperwork for each vehicle), signatures, and stamps. The MTR's commander, MTR S–4, MTR maintenance company commander, and headquarters and service company warehouse officer in charge all had to sign and stamp the packet.

Because it is much easier and faster to buy parts off the local economy, many Iraqi officers do so instead of trying to use the IA system. Procedures are unclear and are constantly changing. Every weekly maintenance meeting is spent clarifying procedures.

Recommendation. Every paper-based system has its inherent challenges. The Iraqi system is not streamlined, and it will take a lot of effort to make it work efficiently. However, the IA must continue to enforce the rules of the system. Having effective maintenance meetings each week can expedite processes and build trust in the system.

The division should have a maintenance standing operating procedure (SOP) to which each subordinate unit must adhere. The LOCOM advisers will work with the G–4 to recommend that the IA counterparts develop their own SOP that provides sufficient details as to who does what at each level.

As U.S. and coalition forces draw down capabilities and start withdrawing from Iraq, the support relationships and operational ties they have built must not be forgotten by their IA partner units. Iraq's future fighting capability and ability to regenerate combat power remain a pending test in confidence in the Iraqi logisticians at all levels. For the IA to transition into a self-reliant and competent army, its logisticians must continue to learn, adapt, and gain necessary training experiences from level III LTATs and other transition teams assisting in their professional development. Iraqi logisticians must learn to implement IA methods and trust the system established by the Ministry of Defense.

Once LTATs are resourced and completely established in the 13 LOCOMs, these third-line trainers will be responsible for teaching, coaching, and mentoring the RMCs on the specific level III tasks. Level III LTATs must be aware of roles and responsibilities and remain synchronized with the LMAT partnered with each LOCOM. This knowledge is important for the level III LTATs, which are normally colocated with the LMAT and are directly responsible for providing the additional training resources that develop the training strategies for the LOCOMs. They should be familiar with the capabilities offered by first- and second-line coalition forces teams that are partnered with IA divisional units and the organizations partnered with fourth-line strategic support IA units.

The progress reports for IA units provided by each coalition forces partnering team must be monitored and channeled through one single agent in the area of operations. This will ensure that the information flows and is validated by all levels to support one desired objective.

Strong partnering and synchronization at all levels will continue to pave the way to a self-reliant and professional IA logistics force, capable of sustaining IA combat operations. Sustainment commands must reach the partnering with purpose overwatch phase set by the ESC and remain observant and ready to take action if an interruption to IA logistics threatens support to ISF operations. This phase will aid in transitioning power from the military to the Government of Iraq and assist in the overall Iraqi stability plan.

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The Human Resources Operations Branch

BY CAPTAIN RODEN A. CARRIDO

Even as a human resources (HR) professional, I didn't know what the human resources operations branch (HROB) of a sustainment brigade's support operations (SPO) section was or what role the branch played within the sustainment community. Usually, Adjutant General officers expect to be assigned to a company-level-and-above unit as a personnel clerk or S–1. I expected to be assigned as a battalion or brigade S–1 with the 16th Sustainment Brigade at Bamberg, Germany. I learned after my arrival at the unit and before we deployed to Iraq in support of Operation Iraqi Freedom 08–10 that I was going to be part of the brigade's new HROB.

What is the HROB?

The HROB is an embedded element of sustainment brigade and expeditionary sustainment command (ESC) SPOs. It is also a modular element that meets the new Standard Requirement Code 12 (SRC12) [Human Resources] structure.

The HROB's mission consists of planning, synchronizing, and managing the setup and operation of postal, casualty, and R5 (reception, replacement, rest

One of the first challenges faced by the 16th Sustainment Brigade HROB was how it would introduce HROB competencies into sustainment exercises during field operations. This would introduce leaders to the HROB and convince them of the value added by the asset. This was achieved by synchronizing HR-related exercises with sustainment operations (for example, coordinating transportation for postal delivery). Before and during our deployment, the HROB built relationships with other elements in the sustainment community that would provide the support it would need for postal, casualty, and R5 operations—the HROB's three primary core competencies.

Postal Operations Challenges

As with all logistics operations and functions that the SPO plans, coordinates, synchronizes, monitors, and controls, postal operations provide deployed Soldiers emotional life support and affect their morale. While deployed to Iraq for 15 months, our HROB mission was postal-heavy because of ever-changing support requirements within our area of operations. Most of the HROB's planning and coordinating efforts focused on

> The HROB plays a vital role in the sustainment community by providing technical guidance to the brigade commander and the HR company responsible for the command and control of subordinate HR elements in the area of operations.

and recuperation, return to duty, and redeployment) elements in conjunction with the SPO's concept of support for servicing the sustainment brigade's or ESC's area of responsibility. The HROB plays a vital role in the sustainment community by providing technical guidance to the brigade commander and the HR company responsible for the command and control of subordinate HR elements in the area of operations. (The execution guidance for the HR company, however, can only come from the sustainment brigade commander.)

The 16th Sustainment Brigade HROB was the second HROB to cover Multi-National Division-North (MND–N). The HROB concept is new, and the challenges are many. HR Soldiers continue to learn the function of the HROB as leaders continue to develop policies and standing operating procedures to solidify the HROB's role as a service provider within the sustainment community.

the timely delivery of mail throughout MND–N, an area roughly the size of Pennsylvania. Our placement in the SPO allowed us to rapidly coordinate for the external sustainment resources needed to execute this mission.

While units move and base populations increase or decrease, the HROB ensures that proper postal support is provided to the units and their Soldiers. The first challenge the HROB faced was a reduction in the size of its postal platoons. An area the size of MND–N requires six platoons, but because of increasing Operation Enduring Freedom requirements, the branch was expected to use only three platoons to perform the same mission with no degradation in the quality of support.

To resolve this issue, the 16th Sustainment Brigade worked with the ESC's HROB and HR company to develop an internal mitigation strategy and a reposturing plan to sustain HR operations that effectively closed the capability gap in postal operations support of MND–N.

All postal platoons, with technical guidance from the HROB, allowed coalition units to dispatch intertheater mail to all permanent post offices, satellites, and mobile operations in support of outlying units.

Postal Operations Oversight

The main Army post offices are manned by contracted civilian personnel who run all aspects of postal operations. Soldiers monitor the operations as contracting officer's representatives (CORs) and technical inspectors.

HROB Soldiers provide oversight and postal guidance to the HR company in exchange for contractor performance feedback. The HROB consolidates the comments from the HR company, provides those comments to the Logistics Civil Augmentation Program's monthly Negative Comment Board, and follows up on issues as needed.

The appointment of a COR is the check in the system that holds contractors accountable for the quality of their work. Units must ensure that CORs are clearly informed about their responsibilities and authority because CORs are responsible for assessing the contractors' performance. Having an active COR helps correct deficiencies, prevents delivery delays to the Army post offices, and ensures that mail gets to the Soldiers on time. Evaluations not only serve as a tool for monitoring contractor performance but also document the COR's performance, providing valuable feedback to the COR and performance appraisal input that can be used by the COR's supervisor.

Casualty Operations

Casualty operations are another critical HROB mission. Casualty liaison teams (CLTs) assigned to the HR company and located with level II+ or III medical treatment facilities ensure the timely and accurate collection and processing of critical casualty information so it can be forwarded to the casualty assistance center for judicious casualty notification. The HR company commander and CLT platoon leader are responsible for ensuring that reports are completed and submitted within 3 hours of an incident. The HROB is solely responsible for supporting CLT planning and force management.

CLT operations are the most mentally and emotionally challenging work an HR Soldier can endure. In addition to verifying timely and accurate casualty reports, both the HROB and HR company assess the mental well-being of CLT Soldiers. CLTs not only provide casualty information; they serve as liaisons for affected commanders and units, provide updated status reports to affected units, and inform units when affected Soldiers leave the theater. CLT Soldiers may see disturbing wounds or injuries and might show signs of emotional stress while on duty. The HROB makes recommendations to rotate individual Soldiers or teams

into other HR positions within the HR company's other support elements to maintain CLT readiness.

R5 Operations

R5 operations require tracking Soldiers who enter, transit, and depart theaters of operations. R5 teams are emplaced at most air-passenger terminals, especially those processing an average flow of 600 or more personnel per day. The primary responsibility of the R5 team is to account for these Soldiers using the Deployed Theater Accountability System.

> While units move and base populations increase or decrease, the HROB ensures that proper postal support is provided to the units and their Soldiers.

The R5 mission of the 16th Sustainment Brigade HROB did not change over the course of the deployment in terms of accounting for the inter- and intra-theater transfer of personnel. A reduced operating tempo and automation systems that were emplaced by previous R5 teams provided the capability for this core competency to be contracted to civilian personnel.

HR and the Special Troops Battalion

Of all the challenges the HROB faced while sustaining and synchronizing the HR mission, the most perplexing was determining the extent of the sustainment brigade's special troops battalion's (STB's) involvement in the HR company's mission. Under the SRC12 modular structure, the HR battalion was removed during transformation, leaving no HR commands above company level. As a result, the HR company was attached to the STB for administrative control and to ensure HR mission execution. The loss of battalion-level HR planning and oversight led to the HROB's establishment within the sustainment brigade and its placement under the SPO.

The confusion really lies with the lines of communication among the HROB, STB, and HR company. Within legacy structures, lines of communication flowed from top to bottom and reverse (for example, platoon to company and company to battalion). Under modularity, technical guidance requests and other information move directly from the HR company to the HROB at the SPO and vice-versa. The STB is not directly involved.

The STB is responsible for the administration, supply, maintenance, training, and readiness oversight of

A Soldier from the postal detachment, 847th Human Resources Company, lifts a bag of mail out of a cart in preparation to sort it. The 847th, an Army Reserve unit from Fort Snelling, Minnesota, was subordinate to the 16th Sustainment Brigade during its deployment to Iraq and was one of the units helping with mail operations. (Photo by SGT Jill Fischer, 116th Public Affairs Detachment)

HR company personnel, but not for technical oversight of the HR mission. Naturally, one could make the argument, depending on their interpretation of current doctrine, that the STB should have HR personnel assigned to oversee the HR company since it is a subordinate company of the STB. (This was a common move made among the sustainment brigades in theater during the year before the 16th Sustainment Brigade's deployment.) Besides the HR mission, however, the HR company operates just like any other company.

Synchronizing HR Support

The human resources sustainment center determined that HROB placement inside the STB was not contributing to the HROB's overall sustainment mission as an external asset while assigned to the SPO. The HROB contains subject-matter experts who provide the technical guidance required to assist the HR company in carrying out its HR support—a function that is similar to the one the SPO performs in planning, coordinating, synchronizing, monitoring, and controlling other logistics services.

While deployed, our HROB personnel remained at the SPO and provided technical guidance through the SPO to the sustainment brigade commander and the HR company. We passed along any information about the HR company's operational requirements to the STB.

The STB and SPO HROB developed a mutually supportive relationship, synchronizing both technical HR operations and command and control oversight of HR support personnel. For example, the STB provided augmentee personnel for a task force created to backfill an HR company; that company had departed and its replacements did not arrive until 90 days after the unit left. The coordinated planning efforts between the HROB and the STB ensured continuous HR support to MND–N. This combination of HROB command leadership and STB personnel provided the command and control for our HR assets of one R5 team, five CLTs, and three postal platoons, all of which were synchronized to execute the HR mission. These efforts resulted in no mission degradation and continual oversight of subordinate HR units.

Postal operations continued to be the HROB's greatest challenge throughout the deployment, but with support from the SPO and sustainment brigade, assistance from the ESC, and cooperation from the STB and HR company, we effectively overcame our challenges and provided top notch postal support to MND–N. Good communication between all HR elements within MND–N was the key to success while supporting the sustainment mission of providing basic and emotional life support to Soldiers.

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Building the Local Economy at Q-West

BY STAFF SERGEANT PATRICIA MCCARTHY, WAARNG

The arrival of two Washington Army National Guard units, the 81st Brigade Special Troops Battalion (BSTB) and the headquarters and headquarters company (HHC) of the 181st Brigade Support Battalion (BSB), at Contingency Operating Base (COB) Qayyarah West (Q-West), Iraq, brought about significant changes on and off the installation. The two units worked diligently to improve economic conditions in the villages around Q-West by providing basic life support and employment to local residents.

"The people of Iraq are anxious to work; educated men are willing to perform unskilled labor in order to feed their families," stated Gee-Gee Kitzler, the Iraqi First Initiative operations coordinator for KBR, Inc. By establishing good relationships with the local village leaders, coalition forces were able to develop multiple strategies for improving the economic state of the local Iraqi population. The units made noteworthy progress by laying the groundwork for employing many local nationals.

Nonlethal Engagement Team

One strategy for improving the local economy was the use of the 81st BSTB nonlethal engagement (NLE) team, which comprised U.S. Soldiers who focused on improving relationships between coalition forces and local nationals. The efforts of the NLE team immensely strengthened the units' connections to the villages surrounding COB Q-West. The NLE program enabled the 81st BSTB to notify local leaders of opportunities for improving their living conditions and to determine which villages were in dire need of employment. The NLE team decided which villages it would use to stage its operations and then notified the local muktars, or village leaders, about the employment opportunities available for each village.

As part of the NLE program, the team began two military construction projects: the development of a new north entry control point and the construction of a perimeter fence to border the COB. Most of the laborers involved in these two projects were from villages around the installation. These 2 military construction projects were expected to require between 50 and 100 workers for a year of employment.

Aside from basic life support necessities, like clean water, food, and shelter, the largest need existing within the local communities was employment. "If you can fix the job situation, you also fix the life support issues," said Lieutenant Colonel Kenneth Garrison, the 81st BSTB commander.

The 81st BSTB NLE team traveled to various local villages several times a week to gather unemployment data for those areas. The BSTB discovered that very few people were gainfully employed within the smaller villages. "In those cases, hiring even one person provides a tremendous benefit," said Lieutenant Colonel Garrison.

The NLE team was successful in providing jobs and improving the local population's economic situation. Captain David Raines, battle captain for the 81st BSTB, said, "Hiring 5 out of 50 people in one village makes a large impact in that village." Employing 1 local national improves the lifestyles of an additional 10 to 20 relatives in his household.

An Iraqi vendor sells merchandise at the monthly souq at Contingency Operating Base Qayyarah West.

Monthly Souqs

First Lieutenant Anthony Marion, officer-in-charge of the Q-West Iraqi-Based Industrial Zone (I–BIZ) team, reported, "One way that HHC 181st BSB is impacting families in local villages around COB Q-West and helping make a change in the economy is by sponsoring monthly souqs." A souq is a market within the COB that allows both Iraqi vendors from the installation and external vendors to sell their merchandise to Soldiers.

Independent Iraqi vendor Miahi Hawwas, a 19-year-old man from the local village of Jedallah, sold his products at the souq for many months. Miahi was quoted saying, "No souq, no work." The revenue he earned at the souq supported his wife and 17 other family members who resided in his household. Miahi is a prime example of the substantial economic contribution the 181st BSB HHC made by simply hosting this monthly event.

Equally important, the HHC hosted informational briefings known as VIP luncheons for village leaders. These meetings, held in conjunction with the monthly souqs, afforded the village leaders an opportunity to communicate their issues to military leaders. The primary coalition attendees were principal leaders from the COB, such as the installation commander Colonel Martin Pitts and garrison commander Lieutenant Colonel Alan Dorow. By bringing these leaders together, issues and concerns were confronted and resolved. Moreover, the VIP luncheon was an opportune time for the coalition forces to advertise any employment vacancies that could benefit the Iraqi leaders' villages.

I–BIZ

Another means of improving the Iraqis' economic position was I–BIZ. I–BIZ is a theater-wide program that offers Iraqi-based contractors and Iraqi retailers a permanent location on coalition bases. The original intent of the I–BIZ program was to encourage the sale of Iraqi commodities to Soldiers and dramatically improve the economic state of local-national business owners.

First Lieutenant Marion and Staff Sergeant Alvin Fernandez, both staff members of the Q-West I–BIZ project, worked extensively with other reconstruction elements at Q-West to encourage businesses from the local villages to become members of the I–BIZ program. The I–BIZ staff also tried to influence independent Iraqi business owners who were contracted by the military to become affiliates of the program. "By doing this, we direct money into the Iraqi economy and help stabilize security by providing jobs so Iraqis can support their families," said First Lieutenant Marion. Without a doubt, an employed Iraqi is less likely to turn to insurgent activity for money.

After the official transfer of authority of the 181st BSB HHC, the unit placed significant emphasis on Iraqi businesses in Q-West. First Lieutenant Marion emphasized, "Our main focus since arriving at Q-West

has been on the Iraqi business." When this article was written, 12 Iraqi businesses were officially associated with the I–BIZ program at Q-West.

Iraqi First Initiative

Another program the units employed to improve the local Iraqi economy was the Iraqi First Initiative. The program involves the preferential hiring of local nationals from communities around the installation. The goal of the Iraqi First Initiative is to balance security and economic objectives by expanding the reconstruction of Iraq's economy and supporting military counterinsurgency efforts.

On 23 March 2009, the Q-West I–BIZ section hosted a job fair at the COB to inform Iraqis of employment opportunities available to them on the base. With the assistance of village dignitaries, over 30 Iraqis attended the event. The dignitaries also provided a list that identified between 100 and 300 local nationals for potential employment at COB Q-West. Afterward, the garrison commander and deputy brigade commander for Q-West met with representatives from KBR, I–BIZ, and the badging office to discuss the process of hiring local nationals mentioned at the job fair.

The hiring process involved a comprehensive security background interview conducted at the badging office and a KBR-facilitated medical screening. Although the Iraqi First Initiative at Q-West began by employing only 20 local nationals, the 181st BSB HHC continued to strive to increase the number of local nationals employed by KBR. "There is no specific number of Iraqis that Q-West is looking to hire. The numbers are based on the need for KBR subcontractors," said Lieutenant Colonel Dorow. KBR does not have a local-national hiring quota, but the HHC's intent was to offer employment to as many local Iraqis as possible.

The 81st BSTB and the 181st BSB HHC provided economic relief to the Iraqi population surrounding Q-West. When they redeployed, these units left Iraq a much more stabilized nation and had contributed to the President's overall mission of employing an effective exit strategy in Iraq. The economic developments these units made helped a nation to become much more sustainable in its economy. A stronger economy will help lay a foundation for lasting peace and security.

Staff Sergeant Patricia McCarthy, WAARNG, served as the Multi-National Force-Iraq access control badging noncommissioned officer and retention noncommissioned officer for Headquarters and Headquarters Company, 181st Brigade Support Battalion, 81st Heavy Brigade Combat Team, which was deployed in support of Operation Iraqi Freedom 08–10. She is currently working toward a degree in business administration and is a graduate of the National Guard Recruiting and Retention Course and the Human Resources Basic Noncommissioned Officer Academy.

Tactical Ground Reporting Improves Operational Picture

<div align="right">BY CAPTAIN SPENCER BROWN</div>

Operations Iraqi Freedom and Enduring Freedom have forever changed how information is disseminated and shared on the battlefield. As the military conducts the war on terrorism, the one constant is that valuable information is gathered at the platoon and squad levels and passed up to higher echelons for military intelligence Soldiers to analyze. Every day, Soldiers exit the wire on patrols or convoys and engage the local populace. In doing so, Soldiers are collecting more information than any piece of technology in the Army's inventory. Having recognized this, the Army has coined the phrase "every Soldier is a sensor."

Tactical Ground Reporting

The "every Soldier is a sensor" concept was improved by the Defense Advanced Research Projects Agency (DARPA) in 2006 with the development of a computer-based program, the Tactical Ground Reporting (TIGR) system, that enables seamless communication of information across the battlefield.

TIGR is a web-based tool that offers a unique multimedia perspective of the battlefield to Soldiers on patrol as well as their higher headquarters. TIGR makes it easier to aggregate information by providing company-level Soldiers the ability to upload patrol debriefs and create reports on data collected from patrols, which are
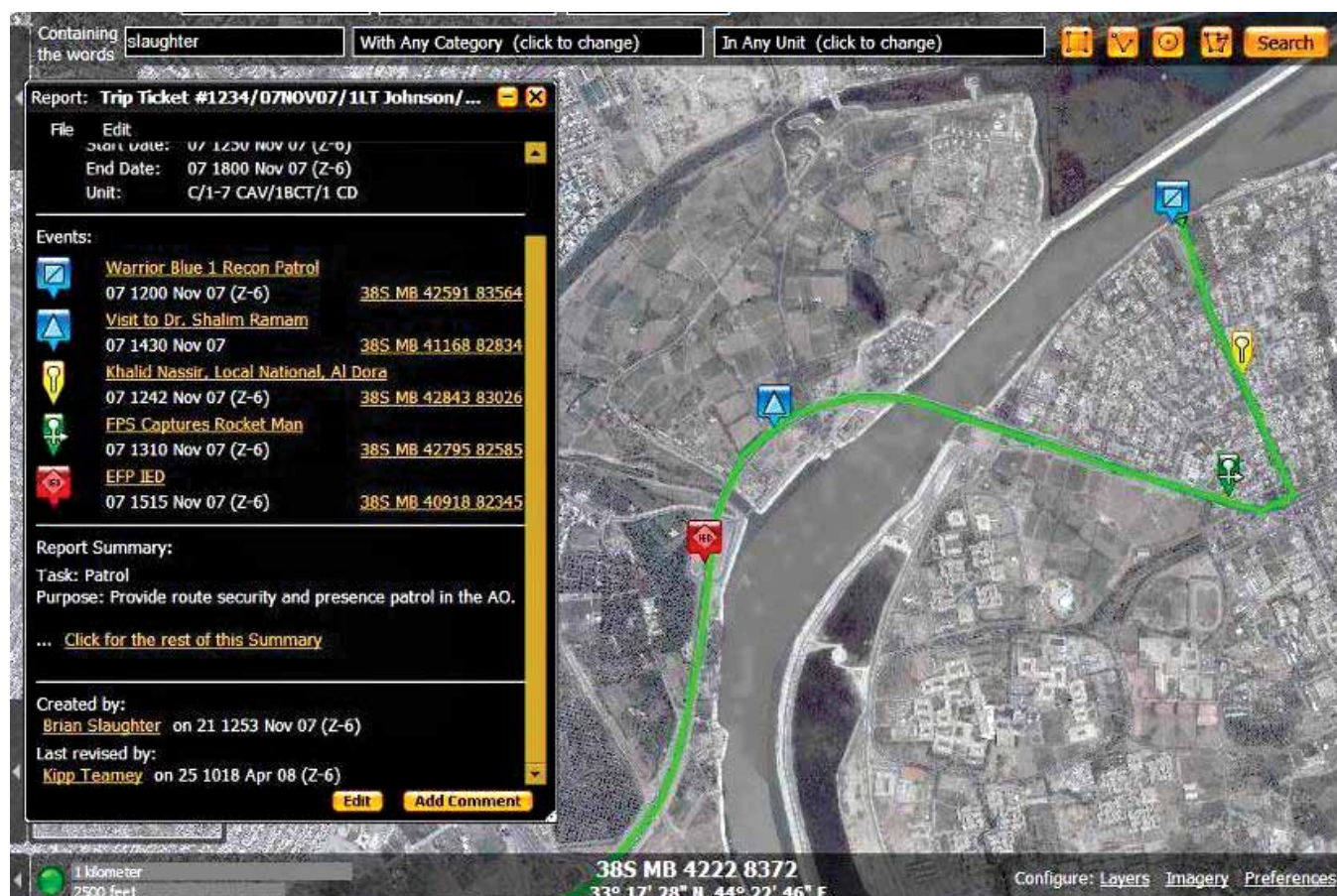
The Tactical Ground Reporting (TIGR) system, shown in this screenshot, provides its users with a platform to consolidate report information and share that information with intelligence analysts and commanders at higher echelons.
Its capability to provide near-real-time information provides patrols and convoys with an up-to-date look at their surroundings before they head out on a mission. (Photo by DARPA)

then stored in a system that is searchable. TIGR allows Soldiers to tailor database searches using a number of different parameters, and it offers search results that are exportable to Microsoft Excel and PowerPoint.

After completing a mission, Soldiers and convoy commanders record in TIGR any observations and events that occurred along their routes. TIGR also enables a convoy commander to upload pertinent pictures or streaming video in addition to the text report. For example, if a convoy commander notices a suspicious vehicle along the route and is able to get a picture, description, and grid location for the vehicle, he can then upload the data and media to TIGR for all to view.

Companies using TIGR can store data in a common database, which enables easier analysis, collaboration, and information-sharing. Intelligence-derived data can then be disseminated and retrieved by all echelons.

The 16th Sustainment Brigade Experience

TIGR was introduced to the 16th Sustainment Brigade in September 2008 and has been exceedingly beneficial to both battalion- and company-level operations. In near-real time, the 16th Sustainment Brigade's battalions used TIGR to easily access reports submitted by companies. The 264th Combat Sustainment Support Battalion (CSSB), a subordinate unit of the 16th Sustainment Brigade, routinely integrated TIGR reporting into their daily battle rhythm.

One of the 264th CSSB's missions was to provide disabled-vehicle recovery support for units traveling within Multi-National Division-North. On one occasion, the 264th CSSB was called to recover a route clearance mine-resistant ambush-protected (MRAP) vehicle that was disabled by an improvised explosive device (IED). This required the 264th CSSB to quickly conduct analysis of the route to the recovery location, which was on a road rarely traveled by the unit.

Within minutes, the battalion intelligence officer (S–2) used TIGR to retrieve the initial SPOT [situation, position, observation, troops and terrain] report from the maneuver unit and provide the battalion operations officer with analysis on the best route to take to the recovery location. The S–2 printed out maps and satellite imagery from TIGR to use in briefing the recovery convoy commander and his

drivers of the threats and enemy tactics, techniques, and procedures in the area. With this information, the convoy commander was armed with enhanced situational understanding and awareness and the 264th CSSB was able to conduct the recovery mission without further incident to their unit.

Battalions now have the resources they need to develop an accurate common operational picture (COP) that can be disseminated laterally and to higher headquarters. TIGR also gives battalions the tools to oversee events occurring within their subordinate companies and provide those units with instant feedback.

Brigade-level staffs can view all reports submitted by subordinate battalions and adjacent brigades. In this way, TIGR has streamlined information dissemination, which greatly enhances situational understanding and awareness.

TIGR's Strengths and Weaknesses

Often, initial SPOT reports received at the brigade level from adjacent units contain gaps in information. To clarify or obtain additional information, TIGR provides users with the ability to contact the individual who submitted the report through email or its forum function. TIGR enables all users to submit postings and reports. This is both one of TIGR's strengths and one of its limitations—the level of detail and specificity of a report depends on the individual submitting it. If a company submits an inaccurate grid location to TIGR, those coordinates will be widely passed along to battalion and lateral units.

TIGR is not a mandatory reporting requirement for units. As a result, many events that may be beneficial to other units that use TIGR go unreported. This can give commanders at lower echelons a false representation of the battlefield. (Battalions and brigades are able to get information from the Command Post of the Future and Distributed Common Ground System-Army.)

TIGR, when emphasized by brigade leaders, will reduce inaccurate reporting from subordinate units and provide a solid COP within the unit structure. TIGR is a positive step toward closing the time gap between sender and receiver of critical reporting. The Army's adoption of this program takes advantage of the military's most effective and valuable information-gathering resource—the Soldier. Both the modern and future battlefields rely heavily on programs like TIGR to assist in gathering and processing information from the asymmetrical battlefield.

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Unit Contracting Problems During Overseas Training Exercises

BY MAJOR WILLIAM T. CUNDY

The Army conducts multiple training exercises in foreign countries every year. These exercises usually are executed in coordination with the armed forces of the host countries.

Contingency contracting teams (CCTs) supporting these multinational exercises typically encounter problems in five areas:

❑ Micro-purchase capabilities of torch and advanced echelon (ADVON) parties.
❑ Deploying units' understanding of the contract requirements definition and approval process.
❑ Use of the mortuary affairs blanket purchase agreement process.
❑ CCT communication requirements.
❑ Army Veterinary Command (VETCOM)-approved requirements and products.

These five problem areas can be addressed before an exercise with proper planning and the inclusion of the CCT in the planning process from the earliest opportunity.

Unit planners and logistics personnel need to ensure that the five problem areas are addressed at initial planning meetings and are revisited at each subsequent planning milestone. Unit leaders and planners need to incorporate the contracting assets available to them into the planning process, and CCT personnel should be included at every planning conference once the mission is assigned.

Units also need to understand that, in order to have all contract arrangements in place when troops arrive in the theater, CCTs should be in country several weeks to months before the arrival of unit personnel. The costs of contracts usually are paid for from the exercise budget, which is another reason why CCTs need to be included in the planning phases. A CCT may need to make multiple trips to ensure that all contract arrangements are set.

Micro-Purchases by Advance Parties

A micro-purchase is a Government purchase of supplies or services that involves less than $3,000 for a single purchase; it does not require competition and is normally conducted informally using a credit card. Torch and ADVON parties commonly do not deploy with a micro-purchase capability, which can seriously inhibit their ability to respond to unanticipated requirements encountered during the initial occupation and setup at the exercise location. Lack of micro-purchase capability can also cause problems with the procurement of supplies needed for tracking cells and exercise preparation cells.

Units can easily avoid these problems by ensuring that torch and ADVON parties possess a micro-purchase capability. Units can accomplish this by deploying personnel with Government purchase cards. Another option is to deploy field ordering officers and pay agents with a funded purchase request and commitment capability before the exercise.

Understanding Contract Requirements

Defining contract requirements is an ongoing process because contract changes will always be part of the planning process for an exercise. However, any changes in requirements must be communicated to contracting personnel immediately.

While contracting personnel usually can make changes to contracts, the cost of those changes can be dramatically affected by the amount of time needed to institute them. Contracting personnel understand that requirements change, are updated, and in some cases are even deleted from an exercise. During the planning phase, units need to differentiate between nice-to-have and mission-essential requirements. This can be addressed during the formal military decision making process and rock drills conducted during planning conferences.

Units always want flexibility in their contracts. Flexibility can be achieved, but the cost will increase because the contractor is accepting risk. The most important factor in reducing costs generated by contract changes is communication between contracting personnel and the unit. The CCT needs to be informed as soon as possible about any possible changes to requirements. A good rule to remember is that changes will be more expensive the closer to mission execution they are made.

Mortuary Affairs Blanket Purchases

Because of its impact on Soldiers and their families, the mortuary affairs blanket purchase agreement process is perhaps the most significant problem area. Units conducting multinational exercises in non-North Atlantic Treaty Organization countries, in particular, need to fully understand and plan for the mortuary affairs processes required for conducting the exercise.

The command responsible for the area of operations will deploy a mortuary affairs team to the country before troops arrive. This team will inspect and certify multiple mortuary businesses for use during the exercise. The process for moving and storing remains will be specified in the international agreement signed before the exercise. The unit should request that the mortuary affairs team thoroughly explain the process and the services required from a specific contractor to the unit's planning and logistics teams.

In most eastern European countries, the government generally has a level of control over the mortuary affairs process that needs to be understood by all parties. The CCT will have a nonfunded contract in place to cover all the requirements identified by the mortuary affairs team. The CCT may find that a mortuary business lacks the authority to sign a U.S. contract (a blanket purchase agreement), and the United States generally will not sign a foreign contract; these issues can be worked out given enough lead time.

A direct relationship exists between the mortuary affairs provider and the pathology requirements of the exercise. The pathology requirements need to be specified by the regional medical center responsible for the exercise area.

The earlier mortuary affairs agreements can be entered into, the more flexibility the contracting officers will have to adapt them to specific exercises. Unit planners and logistics personnel should have copies of the international agreements and mortuary affairs processes on hand at the unit's headquarters.

CCT Communication Requirements

CCTs normally conduct operations on the Procurement Desktop Defense (PD2) system, which provides automated, streamlined strategic contract management support. In many exercises conducted in Europe, the CCT could not establish communication with shared servers located in Germany. These servers maintain the PD2 contracting software and are the gateway to sharing information across relevant Department of the Army and Department of Defense organizations, such as resource management offices and the Defense Finance and Accounting Service.

A CCT needs to have access to its home-station server to conduct contracting actions using PD2. A CCT usually acquires access through a virtual private network connection (using a commercial Internet service provider). CCTs use commercial Internet service providers because of the bandwidth limitations of tactical communications equipment. Units must be prepared to plan, identify, and fund the CCT's move to a location that can provide access.

Before deployment, CCTs and units should have their information management officer investigate and provide the communication requirements needed to operate remotely using PD2. The CCT's requirements can be identified and addressed during the planning phase of the operation by working with the exercising unit's signal personnel.

Veterinary Command Requirements

Many exercises encounter a shortage of some type of class I (subsistence) or water for several often-overlooked reasons. For example, if commonly projected water consumption rates double, the reason could be substandard host-nation sanitary conditions and laundry support, lack of proper tracking of consumed products, customs issues affecting deliveries of water, or lack of a trigger or decision point that prevented the unit from elevating the issue or pursuing an alternate course of action until the problem became critical.

Before the start of any exercise, all logistics decisionmakers should know the locations of class I and water sources in the area, including those in surrounding countries, and the time required to deliver all VETCOM-approved class I and bottled water supplies. Unit logisticians must be aware of the political and cultural situations in the countries in which they operate. For example, during one exercise in Europe, the exercising unit identified a VETCOM-approved water source in a neighboring country, but trade between the two countries had been suspended because of political problems and the water could not be delivered.

Units should also ensure VETCOM inspectors are available during the exercise site survey to coordinate and conduct inspections of potential class I sources of supply. They should contact the closest VETCOM-approved sources to gauge how long it will take to deliver class I supplies; doing so will allow them to establish a realistic decision point.

Contracting for multinational exercises is a complex and difficult process. However, with proper planning and coordination, units can conduct successful exercises in a variety of locations. If units address the five potential problem areas discussed above, they will improve their chances of a successful exercise. However, these five areas are by no means the only ones units need to address; they are just the most commonly neglected or easily ignored ones. The keys to addressing these areas before an exercise are proper planning and including the CCT in the planning process from the earliest possible opportunity.

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Training With Industry

BY LIEUTENANT COLONEL MARSHALL N. RAMSEY

Training with Industry (TWI) provides competitively selected officers, warrant officers, and noncommissioned officers (NCOs) with extensive work exposure to corporate America. The TWI program was originally established to expose military personnel to private-sector procedures and practices not available through existing military or advanced civilian training programs.

The first TWI students participated exclusively in programs that supported the development of skills in materiel acquisition and logistics management. Soldiers received industry training for 12 consecutive months, during which they were exposed to innovative industrial management tactics, techniques, and procedures that benefited the Army. After completing the training, participants were immediately placed in mandatory follow-on Army assignments for 2 years to improve the Army's ability to interact and conduct business with industry. Today, the TWI program has evolved to include training programs that support marketing, finance, and other areas of business.

Program Allocations

In fiscal year (FY) 2002, the Secretary of Defense ordered a comprehensive review of the external use of military personnel in fellowships and TWI programs. His intent was to reduce such programs to minimum-essential levels, thus increasing the operational strength of Department of Defense (DOD) organizations. A DOD external utilization review board recommended suspending the FY 2003 TWI selections and reducing the number of allotted spaces that serve as a baseline for future TWI programs. The board also recommended requiring that TWI tours be followed with an immediate tour in a billet that would make use of the experience gained.

Since then, TWI trend data on allocations for FY 2004 through 2010 show that the Army has had 75 slots each year. The current breakdown is 51 officer, 12 warrant officer, and 12 NCO positions. Of those, sustainment slots fluctuated from 25 in FY 2004 to a low of 20 in FY 2007 and FY 2008 to 27 at present.

Sustainment Training-With-Industry Allocations
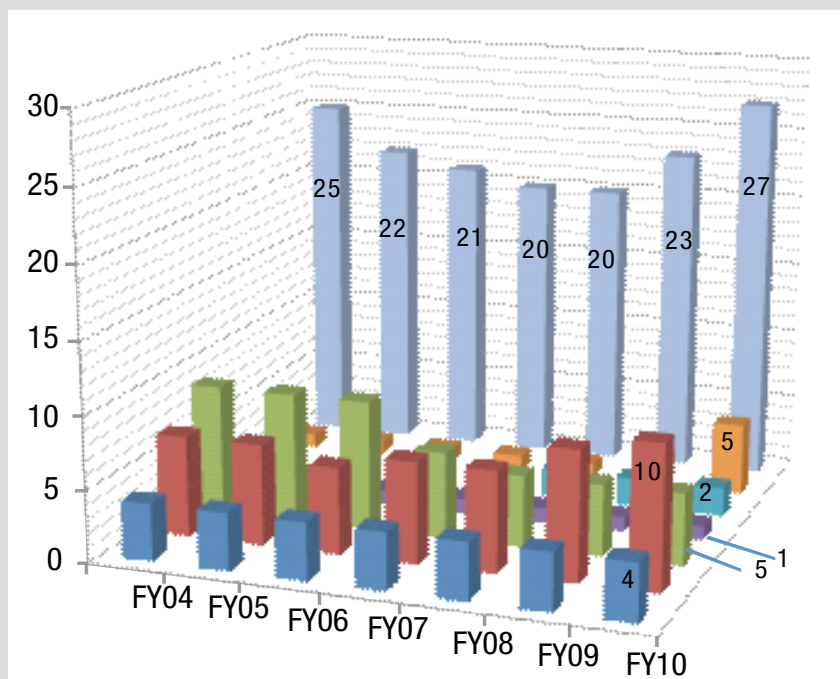
The Army Combined Arms Support Command, Sustainment Center of Excellence, has 1/3 of the Army's slots (27 of 75), including 15 officers, 6 warrant officers, and 6 noncommissioned officers.

- Ordnance
- Quartermaster
- Transportation
- Logistics
- Adjutant General
- Financial Management
- Total

The Army had 75 slots each year from fiscal year (FY) 2004 to FY 2010.

Adjutant general and financial management allocations generally account for the increased number of sustainment slots since they were added to historical programs that supported the development of materiel acquisition- and logistics management-related skills. The Acquisition Corps is part of sustainment; adding in their 10 slots brings the sustainment slots to 37, or roughly one-half of the Army's 75 slots.

Program Execution

A number of organizations play vital roles in executing the TWI program. In particular, the proponents for adjutant general, financial management, logistics, ordnance, quartermaster, and transportation at the Army Combined Arms Support Command (CASCOM) Sustainment Center of Excellence serve as their respective training program coordinators. They also serve as liaisons among industry, TWI students, and the Army Human Resources Command. They establish and control the student's training program by validating field requirements, developing training objectives and training plans, reviewing training reports and travel plans, and validating training.

Sustainment leaders are generally satisfied with current TWI allocations, considering current overseas contingency operations. CASCOM schools continue to refine the number and type of slots in order to better prepare for future training requirements, including recommending additions for ammunition, mobility, and petroleum warrant officers and petroleum, mortuary affairs, and electronic maintenance NCOs. In the meantime, they continue to monitor any potential reallocation of slots.

TWI provides Soldiers with training and skills in best business practices to support DOD requirements. Afterward, participants use that training in a validated TWI assignment position. Overall, sustainment positions (minus those in the Acquisition Corps) receive one-third of the TWI program allocations, and these allotments are increasing. TWI slots now include marketing and finance. Proponency offices are informing competitive officers, warrant officers, and NCOs of TWI opportunities. To paraphrase the Chief of Staff of the Army, take TWI as another opportunity to pick something that suits you and broaden yourself.

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CASCOM FY 2010 TWI Locations

Commissioned Officers

Army Adjutant General School (two slots)
- Microsoft Corporation, Redmond, Washington
- Lockheed Martin Missiles and Fire Control, Grand Prairie, Texas

Army Combined Arms Support Command (one slot)
- LMI, McLean, Virginia

Army Financial Management School (five slots)
- Armed Forces Bank, Fort Leavenworth, Kansas
- Global Exchange Services, Gaithersburg, Maryland
- GE Transportation, Erie, Pennsylvania
- Motorola, Inc., Schaumburg, Illinois
- The Boeing Company, St. Louis, Missouri

Army Quartermaster Center and School (four slots)
- LMI, McLean, Virginia
- ExxonMobil Fuels Marketing Company, Fairfax, Virginia
- Sunoco, Inc. (R&M), Philadelphia, Pennsylvania
- Labatt Food Service, San Antonio, Texas

Army Transportation Center and School (three slots)
- Federal Express Incorporated, Memphis, Tennessee
- Landstar System, Jacksonville, Florida
- LMI, McLean, Virginia

Warrant Officers

Army Ordnance Center and School (two slots)
- Lockheed Martin Missiles and Fire Control, East Camden, Arkansas
- Caterpillar Defense and Federal Products, Mossville, Illinois

Army Quartermaster Center and School (three slots)
- LMI, McLean, Virginia
- Compass Group, Charlotte, North Carolina
- Airborne Systems North America, Santa Ana, California

Army Transportation Center and School (one slot)
- Crowley Marine Services, Inc., Seattle, Washington

Noncommissioned Officers

Army Ordnance Center and School (two slots)
- Lincoln Electric Company, Cleveland, Ohio
- General Dynamics Land Systems, Sterling Heights, Michigan

Army Quartermaster Center and School (three slots)
- The Culinary Institute of America, Hyde Park, New York
- The American Culinary Federation, St. Augustine, Florida (two slots)

Army Transportation Center and School (one slot)
- A.P. Moller-Maersk Terminals, Inc., Portsmouth, Virginia

A TRADOC Best Practice: A Virtual Way to Keep Training Current

BY DONALD D. COPLEY, JR.

The Army Soldier Support Institute hosted an Army Training and Doctrine Command accreditation team visit in July 2009. This article is the first of three that will share the best practices identified during that visit.

All Army Training and Doctrine Command (TRADOC) schools conduct critical task site selection boards (CTSSBs) biannually or when significant changes occur in doctrine or equipment. This process allows training developers to keep institutional courseware relevant. As an Army Soldier Support Institute (SSI) pilot, the Recruiting and Retention School (RRS) has conducted virtual CTSSBs and developed individual critical task reports using the collaborative Army Learning Management System (ALMS) software called Centra.

The TRADOC accreditation team hosted by SSI at Fort Jackson, South Carolina, from 13 to 24 July 2009 identified the virtual CTSSB as a best practice. This article describes and defines the processes used to leverage technology to conduct a virtual CTSSB in a geographically dispersed command while minimizing the impact on recruiting and temporary duty (TDY) costs.

Because of the fast-paced changes occurring in the U.S. Army Recruiting Command (USAREC), an equally rapid process was needed to ensure that all critical tasks, Soldier training publications (STPs), and training products for recruiting Soldiers and civilians remained relevant. Under the guidance of SSI, RRS developed a completely virtual process to conduct CTSSB procedures. By leveraging technology, continuous improvement, and innovative thinking, RRS continues to shape the future of training development. This newly designed process has allowed RRS to update critical tasks for all 18 recruiting skill levels within a 2-week period.

Before the Boards

Training developers normally follow the CTSSB process when conducting a job analysis. The RRS procedures include job analysis, task analysis, and task management. During the 4 to 16 January 2010 CTSSBs, RRS conducted 18 different skill-level task review panels. Through these panels, RRS completed all three major tasks for individual training development as specified in paragraphs VI–1 through VI–3 of TRADOC Regulation 350–70, Systems Approach to Training Management, Processes, and Products.

The RRS training development shop, in conjunction with the USAREC doctrine team and the SSI quality assurance team, hosted nine CTSSB panels during the first week and nine more panels during the second week. The RRS quality assurance evaluator (QAE) developed the Automatic Survey Generator survey, which was sent to all USAREC personnel. This survey is the beginning of the process and is crucial to the success of the CTSSBs.

The survey covered all current critical tasks, knowledge, and skills. By capturing data from field users before they arrived for the boards, RRS was able to identify system changes, performance changes, and any other environmental changes that might affect the performance of the critical tasks. RRS does not rely on panel members to simply serve as subject-matter experts. By using the survey system, RRS can achieve greater consensus from field users and therefore conduct a more organized CTSSB proceeding.

After organizing the survey data, 10 Centra classrooms were created in ALMS. These classrooms were designated as the sites for each week's nine panels and one central control panel. The RRS commandant, who is also the proponent for career management field 79 (recruiting and retention), approved the USAREC operation order (OPORD) establishing the CTSSB tasking. In this order, the RRS director of training (DOT), the SSI QAE, and the USAREC doctrine chief were tasked to be present during the panels' proceedings.

The RRS commandant, who served as the chairman for all 18 panels over the 2 weeks, appointed the DOT to coordinate the CTSSBs. The DOT selected the panel facilitators, who hosted the board proceedings based on their training development backgrounds. Each training developer hosted a complete panel for one specific skill level during each of the 2 weeks. These training developers used SharePoint to house the audit trail files for the proceedings and all documentation used during each panel. The training developers conducted live rehearsals every Thursday for 6 weeks before hosting the CTSSBs.

The DOT also coordinated to have the SSI QAE present for the proceedings to serve as the evaluator. The evaluator ensured that recommendations of tasks as critical or noncritical were based on an appropriate

task selection model. He also ensured that task titles met the requirements of TRADOC regulations. The QAE also helped panel members to understand their roles in the CTSSB process.

Subject-matter experts were chosen through the OPORD announcement. USAREC brigade leadership teams nominated all subject-matter experts to participate in the CTSSBs. Nominees were screened against regulatory requirements to ensure compliance. Subject-matter experts should be one skill level higher than the job for which they are recommending tasks and should have at least 1 year of experience performing those tasks. They recommend changes, provide technical information, determine critical tasks, and develop individual performance steps and measures for each task designated as critical.

During the Boards

Day 1 of the virtual CTSSB allowed panel members to become familiar with terminology, other panel members, and performance expectations. The commandant delivered opening remarks and then introduced the DOT, who conducted a brief overview of CTSSB procedures and outlined the daily processes.

All panel members were required to meet in the central control classroom at the start and end of each day; this permitted interpanel discussions, additional voting as needed, and tie-breaking proceedings for the day's activities. All meetings were held from 1000 to 2000 hours Eastern Time, which allowed for an east-to-west-coast time adjustment for all panel members. During the day, panel members went to their respective rooms for deliberations, discussions, and task development.

In the main panel during day 1, the primary voting was completed for each skill level. A parliamentary procedure was used to ensure orderly voting on tasks. All members were required to vote using the survey engine inside Centra. This allowed individual voting to remain anonymous and avoided undue influence on panel members to vote in any one direction. Task title, conditions, standards, and difficulty, importance, and frequency model designation were all put to a vote. Once voting for a lower skill level was completed, the panels broke into separate Centra sessions to develop individual tasks.

Training developers hosted each of the 18 skill levels in a panel forum using Centra software. These sessions had all of the capabilities needed to conduct virtual real-time collaborative work. Training developers brought up the STPs, task worksheets, knowledge, and skills required to ensure that all aspects of task development were done within TRADOC guidance.

Subject-matter experts used electronic publications, application-sharing technology, SharePoint files, Recruiting ProNet-threaded discussions, and any other technology needed to transfer files, discuss operating systems, and integrate technology into each critical task. All training developers operated out of the same office to ensure the availability of support staff.

After the Boards

Once the panels were completed, the RRS commandant signed the CTSSB executive summary to approve the critical task list. This was another advantage of having the commandant serve as the chairman. He could immediately approve the task list because he was actively involved in the deliberation process and task discussions.

Part of the executive summary included the total task inventory by job and skill level. Within the panels, the RRS training development shop reviewed 18 occupations: recruiter, recruiting station commander, guidance counselor, recruiting operations noncommissioned officer, recruiting master trainer, health care recruiter, health care station commander, recruiting first sergeant, recruiting company commander, recruiting battalion executive officer, recruiting human resources officer (S–1), recruiting battalion operations officer, recruiting battalion advertising and public affairs, recruiting battalion information officer, recruiting battalion mission and market analyst, recruiting battalion supply specialist, recruiting battalion budget specialist, and recruiting battalion education service specialist.

Once the CTSSB panels were completed, the DOT conducted task management. The RRS training developers used the next 2 weeks to upload task data into the Automated Systems Approach to Training (ASAT) database (soon to be replaced by the Training Development Capability [TDC]). This permitted submission of an updated database capture to the Digital Training Management System (DTMS) team. This process provided the field force with the new critical task data within 3 weeks of completing the CTSSB process. In addition to the DTMS update, new STPs and officer and civilian foundation standard manuals were created in a spiral development process and published to match the DTMS database.

This new CTSSB process has done amazing things for USAREC. The USAREC G–4/G–8 has recognized that the elimination of TDY cost requirements has resulted in annual savings of $400,000. The new design allows for the CTSSB process to be performed biannually. This process is helping to keep critical tasks current while keeping pace with the ever-changing needs of USAREC.

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Deployed Army Bands

BY CHIEF WARRANT OFFICER (W–5) JOHN S. FRASER

Army Bands began deploying in support of Operation Iraqi Freedom (OIF) in 2003 and in support of Operation Enduring Freedom (OEF) in 2004. Currently, four bands are in Iraq, three at the division level and one at the corps level. The 56th Army Band, I Corps Band, from Joint Base Lewis-McChord, Washington, is serving as the United States Forces-Iraq band. The 3d Infantry Division Band from Fort Stewart, Georgia, is serving as the U.S. Division-North Band, the 1st Armored Division Band from Wiesbaden, Germany, as the U.S. Division-Center Band, and the 34th Infantry Division Band, Minnesota Army National Guard, as the U.S. Division-South Band. The 34th Infantry Division Band will be replaced by the 1st Infantry Division Band from Fort Riley, Kansas.

The 1st Armored Division Band performs songs during Operation Iron Tuba for the people of Balad, Iraq. (Photo by SGT Kani Ronningen)

In 2004, elements of the 25th Infantry Division Band provided interim band support to U.S. forces in Afghanistan. In 2005, elements of the 10th Mountain Division Band did the same. Army bands have had a permanent presence in Afghanistan in support of OEF since 2006. Leading the way in 2006 was the 10th Mountain Division Band. After 12 months, it was relieved by the 82d Airborne Division Band, which was subsequently relieved in 2008 by the 101st Airborne Division Band. The 82d returned the favor and relieved the 101st in 2009 and is currently on station.

The Army Band Mission

Army bands in Iraq and Afghanistan have the opportunity to accomplish their core mission: to provide music throughout the spectrum of military operations to instill in our forces the will to fight and win, foster the support of our citizens, and promote our national interests at home and abroad.

Division and corps commanders and band commanders must consider using Army bands in a strategic rather than in an operational or tactical sense. Bands in a forward theater provide morale-support performances for U.S. forces. They also have a unique ability to influence the future of the people and nation to which they are deployed. Army bands can also influence the future relationships among U.S. citizens and the U.S. Government and the citizens and governments of other countries. The number of missed opportunities to employ Army bands in this manner is incalculable. Army bands deploy for one reason: to provide music support for the commander's strategic vision.

Types of Band Support

Deployed Army bands provide several different types of support. These include strategic outreach, force support, family support, public diplomacy, community relations, education, and recruiting.

Strategic outreach. As strategic outreach, deployed Army Bands provide live music in virtually every genre, including modern rock, rock-and-roll classics, swing, country and western, salsa, martial, classical, traditional Americana, patriotic, and ceremonial music.

Force support. Army bands in theater have supported birthday celebrations of the Marine Corps, Navy, and Air Force, in addition to the Army's birthday. Deployed Army bands have also supported Army

The 1st Armored Division Band's strategic support mission includes performing for the local community. (Photo by SGT Kani Ronningen)

branch celebrations, unit organizational days, and coalition force activities, including the Australia and New Zealand Army Corps [ANZAC] Day and the British Remembrance Day observances. All traditional U.S. holidays are supported in multiple iterations by the various theater commands and organizations. Army band members have even participated in the support of American citizen naturalization ceremonies. Army bands also support memorial ceremonies for fallen comrades.

Family support. Through today's advanced technologies, all deployed Army bands contribute to family support. Examples include recording audio and video musical selections to be aired at important events at home station and webcasting Christmas concerts from Iraq in real time.

Public diplomacy. Deployed Army bands have provided professional music in support of the embassies of the United States and the United Kingdom at their home sites as well as at their satellite locations. Not only have Army bands directly supported the operational and diplomatic missions of the embassies, but they also have provided morale-support performances for Department of State employees. Army band support of these State Department missions ranges from high-visibility events for dignitaries to quiet, behind-the-scenes events.

Community relations. While deployed, Army band members participate in a number of activities that foster the support of the host nation's citizens and promote U.S. national interests. These activities ensure that the future relationships among our citizens, governments, and cultures have memorable and positive foundations. Community outreach can be as sophisticated as advanced music classes at local schools of fine arts or as simple as teaching a handful of Boy Scouts and Girl Scouts to play recorders.

Education. Everything Army bands do is related to education. Not only are they engaged in the music education of host-nation youth and adults, but they also educate their own forces on what the band brings to the fight. All band members should educate leaders on how to use the band's unique capability to directly enhance the mission or, through morale performances, indirectly enhance the mission by rejuvenating the military personnel through music.

Recruiting. In a combat theater, recruiting may seem like an unusual mission in an unusual venue. Any Army band leader who has been around a while knows that our forces have much untapped musical talent that goes unnoticed. While bands usually do not actively recruit in a combat theater, potential Army bandsmen often come to the band leader with interest in the Army band program. This may be due to bands having much more direct contact and interaction with forces in a combat

theater than we do in a continental United States garrison environment.

Transportation

Arranging for transportation is a constant mission challenge. With the exception of bugler support for memorial ceremonies, routine band missions are a low priority for aviation assets. Traveling by airplane is generally not a problem. However, traveling by helicopter or ground transportation can be a significant logistics challenge.

Army band members would like to take everything they own on every mission, but when using helicopters and even some ground transportation, the load must be kept small and light. Fifteen hundred pounds of equipment is about the limit. Before the advent of mine-resistant ambush-protected (MRAP) vehicles, bands faced the challenge of moving a brass quintet by up-armored high-mobility multipurpose wheeled vehicle (HMMWV) convoy. A HMMWV simply has no place to put a tuba in a road case. Now, with the advent of various iterations of MRAPs and up-armored light medium tactical vehicles, moving a band by convoy is less of a challenge.

Instrument Maintenance

Another challenge is maintaining musical instruments while deployed. Maintenance of musical instruments above the user level is nonexistent in theater unless the band has a noncommissioned officer trained to accomplish this task. Band personnel are prohibited from performing instrument maintenance tasks for which they have not been adequately trained. An amateur effort to repair an instrument could result in permanent damage to its precision mechanisms.

Instrument repair is a master craft that takes years to learn. Training opportunities are available and range in intensity from a few days at a military repair facility to a year at only a few colleges in the country. Most civilian

instrument repair technicians learn the old-fashioned way: through apprenticeship with a master craftsman.

Army leaders supporting bands must ensure that adequate facilities and resources are provided for the band to conduct a preventive maintenance program. This includes instrument repair kits authorized by the modification table of organization and equipment, a clean working environment, a deep sink for washing out brass instruments, plenty of maintenance supplies, and additional equipment and supplies as determined by the band commander.

Band leaders at all levels must ensure that proper care is taken and maintenance performed to prevent premature aging of instruments. Inevitably, many musical instruments are damaged beyond repair by excessive wear and tear in a performance environment for which professional musical instruments were never intended—the deployed theater. Band leaders must plan for instrument repair and replacement through the reset process. This process has been very challenging for Army bands since all musical instruments and musical support equipment are commercial off-the-shelf products.

Reset

The Army Force Generation process, as the parent plan of reset, should be modified for Army bands because band instruments must be repaired or refurbished quickly after redeployment. Army band members must be without their musical instruments for the shortest time possible for several reasons.

The ability to practice is the most critical reason that band members must keep their equipment with them. Without continual practice, musicians quickly lose their highly perishable individual and collective musical skills. As with any physical requirement, the longer

Members of the 34th Infantry Division Band perform as the "Red Bulls" rock band at Contingency Operating Base Adder on 14 June to celebrate the Army's 234th birthday. The Red Bulls are part of the 34th Infantry Division Band, Minnesota Army National Guard. (Photo by SGT Mark Miranda)

one does not exercise specific muscle groups or skills, the longer it will take to regain those skills. For Army band members, those skills are specifically established and delineated by regulation and assessed by band commanders. Once individual skills are regained to standard, collective training can begin.

Another critical reason that band members must have their equipment when they redeploy is that Army band mission requirements and demands for Army band participation do not decrease after redeployment. Actually, just the opposite is true. Following redeployment, Army bands are more in demand by their command and other organizations that they normally support.

For these two reasons, a redeployed Army band's musical instruments and support equipment must be repaired or replaced as quickly as possible. Bands with the foresight to identify musical instruments to replace before redeployment should do so while the unit is still deployed. This will ensure mission capability after their return.

Doctrine

Doctrine on how Army bands should be employed is sometimes misinterpreted. Army band commanders are experts in all band matters, including employment of their bands. By Army doctrine, Army band operations is a human resources core competency that requires the G–1's attention. In both a garrison and a deployed environment, the G–1 or deployed C–1 of a command responsible for an Army band must take ownership of that band. Along with the band commander, the G/C–1 handles all band matters, including operations, under the guidance of the command chief of staff.

Army bands never should be deployed with a preconceived plan of missions for which they have not been trained. Army bands can contribute to the common defense of their home base, a convoy, or a remote forward operating base when and only when the tactical situation dictates. The unique individual and collective skills of band members should never be ignored, taken for granted, or wasted. Army bands bring to the area of operations a unique capability that no other unit possesses and that should be used to the fullest. Leaders should always be encouraged to take ownership of the command's band and to advocate supporting the band commander and band operations.

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The Globalization of Military Logistics

BY MAJOR CHRISTINE M. SCHVERAK

The United States, in its ninth year of combat operations in Southwest Asia, employs at least one civilian contractor for every service member on the battlefield.[1] Even though half of the Pentagon's budget pays for these private contractors,[2] 82 percent of them are not U.S. citizens.[3] One might ask, so what? While the globalization of U.S. military logistics revolutionized battlefield support, it also fundamentally changed how developed nations procure military resources. Economic globalization has created a requirement for strategic resource management. Although the United States is leveraging the international economy to support its operations in Iraq and Afghanistan, it is not yet strategically managing the resource consequences. Other nations will mimic U.S. global logistics techniques. When they do, if the United States has not learned to manage its resource dependencies, its military advantage will be blunted, if not brought to a screeching halt.

The U.S. Military's Globalization of Logistics

In 1985, the Army began its large-scale foray into contracted logistics support with the Logistics Civil Augmentation Program (LOGCAP),[4] a program designed to support short-term military operations.[5] The program also reduced the tooth-to-tail[6] ratio of the Army.[7] Strategically, the development of LOGCAP is not the real news story. The real news is what happened when LOGCAP became integrated into a worldwide logistics network. In 2003, when the United States began Operation Iraqi Freedom, the spiraling need for contracted logistics support just happened to coincide with an exponential growth in the social and political phenomenon that was coined the "globalization" of the world marketplace.[8] Together, these factors continue to fuel the unprecedented use of foreign contractors to provide logistics to U.S. troops and all other U.S. Government agencies in theater.

By late 2007, over 180,000 contractors and 160,000 U.S. troops shared the Iraq battlefield.[9] By late 2009, over 104,000 contractors and 64,000 troops shared the Afghanistan

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[1] James Jay Carafano, *Private Sector, Public Wars: Contractors in Combat—Afghanistan, Iraq, and Future Conflicts*, Praeger Security International, Westport, Connecticut, 2008, p. 38.

[2] Ibid., p. 66.

[3] Moshe Schwartz, *Department of Defense Contractors in Iraq and Afghanistan: Background and Analysis*, Congressional Research Service Report for Congress, 14 December 2009, pp. 10 and 13.

[4] Ibid., pp. 43–44.

[5] Ibid., p. 43. LOGCAP is a pragmatic initiative within the Department of Defense to reduce both logistics costs and the effects of manpower shortages on theater logistics. Army Regulation 700–137, Logistics Civil Augmentation Program, states that LOGCAP's purpose is "to preplan for the use of civilian contractors to perform selected services in wartime to augment Army forces. Utilization of civilian contractors in a theater of operation will release military units for other missions or fill shortfalls. This provides the Army with an additional means to adequately support the current and programmed force. Specific advanced acquisition planning objectives are as follows: *a.* Resolve the combat support and combat service support unit shortfalls represented in operations plans (OPLANS) and in the Army program. *b.* Consider conversion of existing support units based upon availability of contract support in wartime. *c.* Provide rapid contracting capability for contingencies not covered by global OPLANS. *d.* Provide for contract augmentation in continental United States (CONUS) during mobilization."
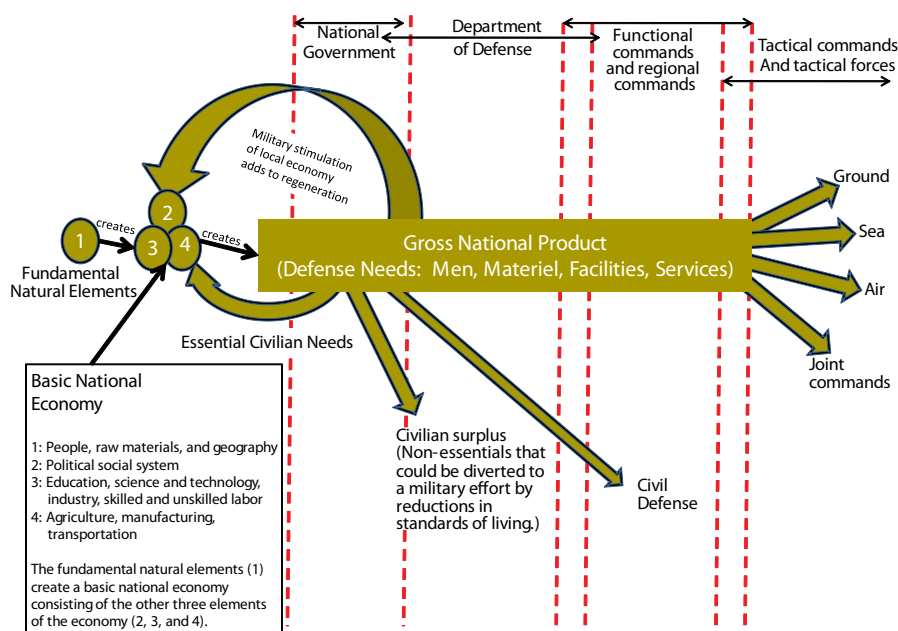
[6] Tooth-to-tail is a metaphor for the idea of allocating personnel and resources to the fighters (the teeth) while reducing military personnel and resources allocated to the supply line (the tail). Facing budget shortfalls, the idea is to keep a lean Army by resourcing primarily the warfighters. With LOGCAP, the Army is able to meet the demand for logistics support in contingencies without carrying large logistics capability as an inhouse military function in peacetime.

[7] LOGCAP took 7 years to implement and did not truly become a reality until 1992 when Brown & Root Services (now KBR) won the first contract to provide support to U.S. forces in Somalia. Carafano, pp. 43–44.

[8] Globalization is "the development of an increasingly integrated global economy marked especially by free trade, free flow of capital, and the tapping of cheaper foreign labor markets." Merriam-Webster's Online Dictionary, <http://www.merriam-webster.com/dictionary/globalization>, accessed on 25 February 2010. The webpage for the Stanford Encyclopedia of Philosophy discusses globalization as a "fundamental [change] in the spatial and temporal contours of social existence. . . . As the time necessary to connect distinct geographical locations is reduced, distance [is compressed] . . . . [such] that alterations in humanity's experiences of space and time are working to undermine the importance of local and even national boundaries." (William Scheuerman, "Globalization," Stanford Encyclopedia of Philosophy, 21 June 2002, <http://plato.stanford.edu/entries/globalization>, accessed on 25 February 2010.

[9] T. Christian Miller, "Contractors Outnumber Troops in Iraq," *The Los Angeles Times*, 4 July 2007. As the United States draws down, these numbers are decreasing. In late 2009, the United States had over 113,000 contractors and 130,000 troops in Iraq—a ratio of .87 to 1.

This chart represents Henry Eccles' national logistics bridge. The figure contains the following labels:

National Government — Department of Defense — Functional commands and regional commands — Tactical commands And tactical forces

Military stimulation of local economy adds to regeneration

1 2 3 4 creates creates

Fundamental Natural Elements

Gross National Product (Defense Needs: Men, Materiel, Facilities, Services)

Essential Civilian Needs

Ground
Sea
Air
Joint commands

Civilian surplus (Non-essentials that could be diverted to a military effort by reductions in standards of living.)

Civil Defense

Basic National Economy

1: People, raw materials, and geography
2: Political social system
3: Education, science and technology, industry, skilled and unskilled labor
4: Agriculture, manufacturing, transportation

The fundamental natural elements (1) create a basic national economy consisting of the other three elements of the economy (2, 3, and 4).

This chart represents Henry Eccles' national logistics bridge. Eccles wrote that the fundamental natural elements create a basic natural economy, which in turn generates a gross national product.

organizational system.[14] Historically, the United States and most nation-states have procured war resources from within their own borders. Rear Admiral Henry E. Eccles described the post-World War II-era organizational system in his seminal book, *Logistics in the National Defense*.[15] In his book, Eccles described a "closed organizational system" reflecting what he called the "national logistics bridge." (See figure at left.)

The national logistics bridge focused entirely on the United States. It portrayed strategic logistics from its genesis in the U.S. economy, moving on to the production of defense articles in the United States, and ending with the distribution of those defense articles to a theater of war. For Eccles, strategic logistics starts with the U.S. economy's fundamental natural elements: people, raw materials, location, and natural resources.[16]

Today, many economists would find these elements to be similar to the factors of production.[17] Eccles wrote that the fundamental natural elements create a basic natural economy, which in turn generates a gross national product (GNP).[18] Part of the GNP is then extracted through taxes and used to hire U.S. companies to produce defense articles. The defense articles are then transported some distance from the United States to the theater of war, where they are provided to service members.

Looking to organizational theory, one can view Eccles' logistics bridge through the lens of the resource dependence perspective (RDP). The RDP,

battlefield—a ratio of 1.63 to 1.[10] But the increase in battlefield contractors is not the most important aspect of this globalization phenomenon. Real insight comes from examining the contractor employees' countries of origin.

In 2007, contractors in Iraq comprised roughly 21,000 Americans, 43,000 foreign contractors, and 118,000 Iraqis.[11] In 2007, 7 of the top 10 corporations doing business with the U.S. Government in Iraq were not even U.S. companies.[12] By late 2009, contractors in Afghanistan comprised roughly 9 percent U.S. employees, 16 percent third-country nationals, and 75 percent local nationals.[13]

Unplanned Military Organizational Change

By choosing to hire foreign logistics contractors, the United States strategically altered its national logistics system from a primarily closed, state-based organizational system to a primarily open, non-state-based

[10] Ibid.

[11] Ibid.

[12] Ibid. (Please note that this list does not include the diverse nationality of all the subcontractors involved.) In late 2009, contractors in Iraq comprised 26 percent U.S. employees, 47 percent third-country nationals, and 26 percent Iraqis.

[13] Moshe Schwartz, p. 13.

[14] The difference between an open and closed organizational system lies in the environment that the organization relies on to get its inputs in order to produce an output. A closed organizational system depends on its own inner environment to get its inputs, ignoring its surroundings. It is impervious to new external inputs, even if the inputs are there. An open organizational system depends on inner and exterior inputs to produce an output or result. It adapts to new external inputs by rapidly integrating the input into its output. (Mary Jo Hatch, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives,* Oxford University Press, New York, 1997, pp. 78–79.)

[15] Henry E. Eccles, *Logistics in the National Defense*, The Stackpole Company, Harrisburg, Pennsylvania, 1959, pp. 54–55.

[16] Ibid.

[17] Campbell R. McConnell and Stanley L. Brue, *Economics*, 13th ed., McGraw-Hill, Inc., New York, 1996, pp. 22–23 and G-10. Factors of production are a country's economic resources—its land (including all natural resources), capital (including all manufactured aids to production like tools, machinery, equipment, factories, transportation, and distribution facilities), labor, and entrepreneurial ability.

[18] Gross national product is "the total market value of all final goods and services produced annually by land, labor, and capital and entrepreneurial talent supplied by American residents, whether those resources are located in the United States or abroad." On the other hand, gross domestic product refers to "the total market value of all final goods and services produced annually within the boundaries of the United States, whether by American or foreign-supplied resources. Final goods are "goods which have been purchased for final use and not for resale or further processing or manufacturing (during the year)." (McConnell and Brue, pp. G-13 and G-11.)

World War II- Era National Logistics Bridge
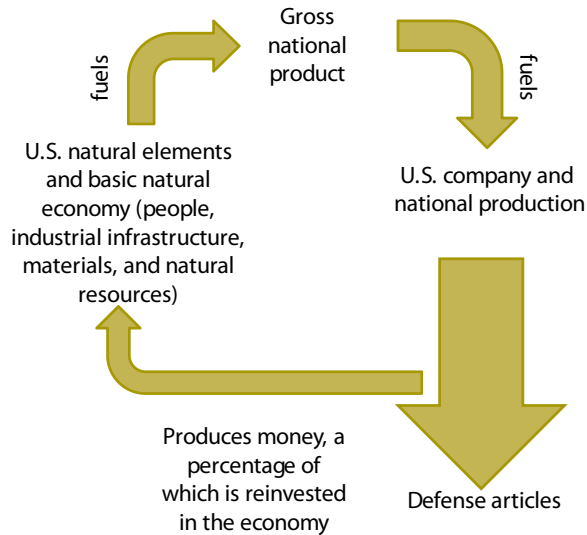
This conceptual diagram illustrates how Eccles' bridge is a closed-loop system and how it is regenerative in that the U.S. production of defense articles results in a monetary reinvestment in the economy.

Today's National Logistics Bridge
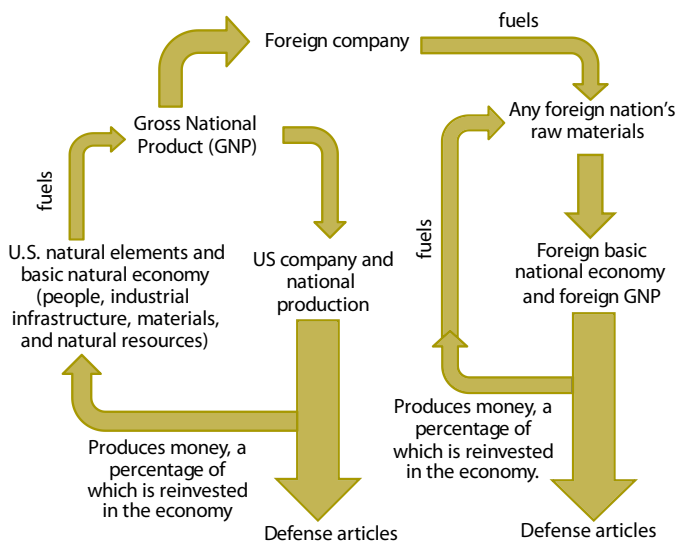
This diagram of today's more open organizational system reflects how a portion of the U.S. gross national product is diverted to foreign companies.

developed by Jeffrey Pfeffer and Gerald R. Salancik, is a theory that "emphasizes the point that the environment is a powerful constraint on organizational action."[19]

Using the RDP theory to analyze Eccles' logistics bridge, the Nation's ability to wage war is limited by its resource environment—its own fundamental natural elements. Under this closed-system model, the United States can only wage war to the insular limits of its people, its industrial capacity, and most importantly, its GNP.

Eccles' system is a closed organizational system because defense needs are met from elements or resources that are assumed to come from within the country itself. This results in a relatively stable and somewhat mechanistic systems view of the logistics bridge. (See figure at top left.) Eccles notes that this system is regenerative in that the production of all the defense needs inside the United States fuels an increased GNP over time.

This is Eccles' logic: The U.S. Government, through Government procurement activities, returns part of the GNP back to U.S. businesses in the United States by contracting for goods or services. The U.S. businesses use that money to build or optimize existing industrial infrastructure and capacity, produce goods for the military effort, and pay U.S. workers.

Those U.S. businesses and their workers then pay taxes that generate more Federal revenue. The industrial infrastructure also fuels more capacity for business, which in turn further increases the GNP. In effect, Eccles' logistics bridge posits that all the environmental resource constraints can be expanded over time by a regenerative GNP cycle that occurs when the defense production effort is within U.S. borders.[20]

Today's Open Organizational System

Today, however, DOD is not using Eccles' famed logistics bridge in the same way. Globalization has radically transformed this bridge into a more open organizational system that capitalizes on the wider, global environment. Using an RDP perspective, the open-system view demonstrates that both the available factors of production and the available labor market have expanded well beyond U.S. domestic borders to a world of globalized companies. These companies can be private or owned by foreign governments.[21]

To update Eccles' logistics bridge, we have to modify the model to include globalization. Today, LOGCAP has modified the logistics bridge by expanding the resource environment that used to constrain the Nation's ability to wage war. (See lower figure.)

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[19] Mary Jo Hatch, *Organization Theory: Modern, Symbolic, and Postmodern Perspectives*, Oxford University Press, New York, 1997, pp. 78–79. "Resource dependence theory was most fully developed by Jeffrey Pfeffer and Gerald Salancik who published their ideas in 1978. Their book was provocatively titled *The External Control of Organizations* to emphasize the point that the environment is a powerful constraint on organizational action. Although resource dependence theory is based on the assumption that organizations are controlled by their environments, these theorists also believe that managers can learn to navigate the harsh seas of environmental domination."
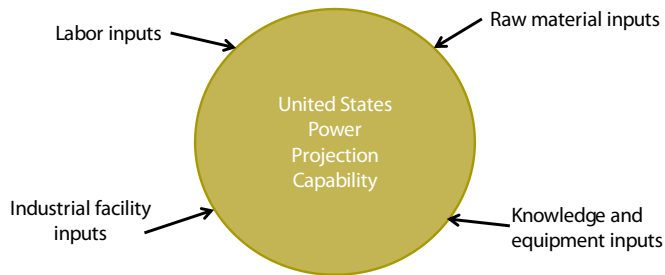
[20] A criticism of Eccles' regenerative argument is that it assumes that increased governmental spending does not have a negative impact. For example, procuring goods and services overseas may actually *increase* the U.S. GNP. Cheaper overseas labor and production rates may allow the United States to pay less for products and services, leaving more resources inside the Nation for other economic activities that will increase GNP.

[21] One example would be Saudi Aramco, an oil company owned by the Saudi Arabian government.

Resource Dependence Perspective
Know Where Your Key Resources Come From

Labor inputs

Raw material inputs

United States Power Projection Capability

Industrial facility inputs

Knowledge and equipment inputs

The resource dependence perspective illustrates how U.S. power projection capability is dependent on the sources of all its key resources.

Ultimately, even with the more open organizational system, the Nation's ability to wage war is still limited by its overall GNP. However, the new model suggests that the United States is no longer limited to the fundamental natural elements and the basic national economy existing inside its borders.

The United States has expanded its capabilities to include the entire global mix of natural elements and foreign economies. The ability to produce defense products has been expanded from U.S. companies to any global company with the capability to produce goods or services. Rather than a bridge, today's logistics system looks much more like a spider web, with different items supplied through independent strands. This open system is much more flexible and can rapidly adjust to changes in the resource environment.

Consequences of Hiring Foreign Contractors

The size and scope of the current globalization of world markets is unprecedented. So are the effects. The consequences of the use of foreign logistics contractors pose both strategic advantages and strategic challenges for the United States in at least six key areas. The first strategic consequence of this open system view is economic. Hiring foreign contractors does not rejuvenate the U.S. GNP to the same extent that Eccles' closed organizational system suggests. When the United States hires host-nation and third-nation contractors, the regenerative effect of those contracts is economically beneficial to the host nation and the third-party nations, instead of the United States.

On a positive note, it appears the United States has found an indirect way to harness the free market system for wealth redistribution to needy nation-states. This can be a long-term strategic advantage. By contracting 81,000 Iraqis in 2007, for example,

the United States provided a significant stabilizing opportunity to Iraq as well as an incentive for it to become part of the globalized economy. This is important to Iraq, the United States, and the world because it contributes to reaching the goal of long-term stability in the Middle East. The genius of this endeavor is that the money never flows directly into the hands of the nation-state, where it could be diverted, squandered, or mismanaged. It goes directly into the hands of commercially oriented entrepreneurs and individual employees.

On the other hand, because the majority of the U.S. defense budget is not going to U.S. corporations, the United States gets less tax revenue and less growth in its own industries. As a result, while the war effort is not rejuvenating the U.S. GNP as much as it could, the GNP still remains the single most constraining factor on the Nation's ability to wage war. As author Geoffrey Parker put it, "great sums of money are the sinews of war."[22]

The second strategic consequence of using foreign logistics contractors is in the expansion of personnel available to a nation to conduct war. Looking back to history, today's use of foreign contractors on the battlefield is analogous to the *levée en masse* that tripled Napoleon's French army in 1 year. From about 1792 to 1815, political and social changes led France to become a nation of citizens instead of a nation of kings and serfs.[23]

After France made everyone a citizen, it became possible to call for the entire French male population to join the military.[24] Nationalism among the people helped to triple the size of the French army almost overnight. With so many men under arms, Napoleon expanded his Army's military structure, leading to a more maneuverable and sustainable force.[25] His larger army and reorganized military structure led to multiple battlefield successes—until his enemies copied him.

Today, the United States fields a small volunteer force, but by privately contracting with companies (not countries), the United States has essentially added 217,832 people in support of theater contingency logistics, and very few of them are from the United States.[26] The United States then funnels the limited number of American service members into key warfighting positions.

The third strategic consequence is the quality of performance. The use of U.S. and foreign contractors on the battlefield has decidedly led to outstanding battlefield logistics support. One benefit of private

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[22] Geoffrey Parker, *The Cambridge History of Warfare*, Cambridge University Press, New York, 2005, p. 430.

[23] Ibid., pp. 57–58.

[24] Ibid., p. 8.

[25] Steven T. Ross, "Napoleon and Maneuver Warfare," U.S. Army Command and General Staff College, Fort Leavenworth, Kansas, 2008, p. 106; MacGregor Knox and Williamson Murray, *The Dynamics of Military Revolution 1300–2050*, Cambridge University Press, New York, 2001, p. 67.

[26] This figure is the number of contractors in both Iraq and Afghanistan in September 2009. (Moshe Schwartz, p. 5.)

foreign contractors is the strategic advantage that comes with reducing the length of the military's supply lines. Historically, armies have had to conclude operations when supply lines become too long because the lines are too slow and too open to enemy attack. As a result, the speed of an army's advance has traditionally depended on the ability of its logistics to keep pace. No better example can be found than the desert exploits of the German General Erwin Rommel in North Africa during World War II.[27] The advance of his motorized army was often constrained by his inability to push fuel quickly to his tanks.[28]

Today, the United States is reducing the effect of long supply lines by paying local and foreign corporations to provide supplies near the area of operations. Moving supplies by private means makes the supply line look more like a web. Private supply movement initially makes it more difficult for the enemy to identify supply lines, and it may significantly shorten the distance basic supplies and services have to travel to reach troops.[29]

The fourth strategic consequence of using foreign private contractors is a likely loss of the U.S. "monopoly over the technology and [other proprietary] means used to generate combat power."[30] Essentially, globalization is so extensive that the United States cannot control or contain it. Companies under Government contract often independently move the physical location of their private businesses outside the country or subcontract with foreign companies to meet their contractual obligations.

The Army's fielding of the black beret in 2000 is a good example of the debacles that can ensue.[31] Although a U.S. company won the contract to produce the beret, the company had to subcontract with production facilities in China and Sri Lanka.[32] A Congressional Research Service Report to Congress noted that the Department of Defense had known for 25 years that no manufacturer was capable of creating a beret made wholly in the United States, even though the law required it.[33] While getting fabric from China may not seem to be a big deal, it most certainly would be a big deal if no manufacturer in the United States could provide titanium, a key component in aircraft and other military hardware.

This potential loss of technology and other proprietary means to generate combat power ties into the fifth and sixth strategic consequences of using foreign contractors: resource competition in a global supply chain. The fifth consequence of using foreign contractors is simply the U.S. dependence on this global supply chain. In essence, the United States is procuring components for its weapons through exterior strategic lines of communication.[34] Parts from many different supply points converge in the United States for final assembly, much like several divergent units converge on a military objective.

During World War II, as Eccles suggests, the United States predominantly produced its weapons by mobilizing its own industrial base and mining its own raw materials. At that time, the United States procured the majority of its weapons and components through interior lines of communication that the United States controlled and protected.

The new global logistics market for defense articles looks like a spiderweb. Each strand represents a private company providing a military resource. The web is flexible, and the spider (the Nation) can easily repair the web. However, the web is now part of the wargame, with multiple spiders vying for territory on the web strands.

Thus, the sixth consequence is that as other countries mimic LOGCAP, resource competition will develop (a key theoretical point in RDP). This is apparent is two ways. First, as all spiders are now on the same web, the

[27] When General Rommel entered North Africa in 1941, he found his fuel supply lines a tether to his "war of mobility." (Field Marshal Erwin Rommel, *Rommel and his Art of War*, Greenhill Books, London, 2003, p. 135.)

[28] General Rommel continually pushed his motorized forces to the very limits of their fuel, optimistically hoping for resupply. (Ibid., p. 135.) Sometimes he counted on supplies from captured British positions, like Tobruk, Libya, about which General Rommel wrote, "Our victory at Tobruk had been at the cost of the last of our strength, since fighting an enemy who had superior numbers of men and equipment had taken its toll on my units. But now that we had amassed enormous booty in the shape of munitions, petrol, rations and supplies of all kinds, the preparation of another offensive strike was possible." (Ibid.) Rommel's optimistic attitude on supplies invited criticism. For example, in April 1941, Rommel attacked Mersa el Brega. His 5th Division desired 4 days of refueling. He gave them 24 hours instead. (Ibid., p. 65.) Rommel's Italian counterpart, General Italo Gariboldi, criticized "that supplies to the Italo-German troops were so limited that no one could assume responsibility for such an undertaking, or answer for the consequences that might ensue." (Ibid., p. 66.) When Rommel's troops advanced on Mechili, Libya, some tanks did run out of fuel. (Ibid., p. 67.) Rommel advanced quickly, took Mechili, and continued. In the end, he pushed his motorized forces over 900 miles while his main supply base remained behind in Tripoli. (Ibid., p. 73.) One solution to Rommel's lack of supplies was to use up to 85 percent of captured enemy vehicles as his transport pool. (Ibid., p. 139.) He also focused attacks on areas that he thought would ease his supply problems, like Tobruk and Bir Hacheim, Libya. (Ibid., pp. 110 and 139.)

[29] For more complex technology, however, the effects are almost the exact reverse.

[30] Carafano, p. 37.

[31] The Berry Amendment required that the beret be completely made in the United States. "The Berry Amendment, codified at 10 U.S.C. 2533a, is a statute passed by Congress in 1941 that "requires the Department of Defense (DOD) to give preference in procurement to domestically produced, manufactured, or home grown products, notably food, clothing, fabrics, [hand tools, specialty tools], and specialty metals...[i]n order to protect the U.S. industrial base during periods of adversity and war." It was originally written to ensure "that U.S. troops wore military uniforms wholly produced within the United States and to ensure that U.S. troops were fed with food products produced in the United States." Other restrictions were added later. The restrictions apply to prime contractors and sub-contractors. However, "the Defense Federal Acquisition Regulation Supplement (DFARS) [225.7002] includes exceptions for the acquisition of food, specialty metals, and hand or measuring tools when needed to support contingency operations or when the use of other than competitive procedures is based on an unusual and compelling urgency." (Valerie B. Grasso, *Congressional Research Service [CRS] Report to Congress: The Berry Amendment: Requiring Defense Procurement to come from Domestic Sources*, U.S. Library of Congress, Washington, DC, 21 April 2005.)

[32] Ibid., p. 4.

[33] Ibid., p. 16.

[34] "A force operates on interior lines when its operations diverge from a central point. Interior lines usually represent central position, where a friendly force can reinforce or concentrate its elements faster than the enemy force can reposition. . . . A force operates on exterior lines of operation when its operations converge on the enemy." (Field Manual 3–0, Operations, Department of the Army, Washington, DC, 2008, pp. 6-12–6-13.)

market will likely provide other countries with military technology originally developed for the United States, thus weakening our technological edge. It will also provide other countries with production facilities that the United States no longer possesses. But as globalization expands, all the spiders (nations) will have to grapple with the strategic realities inherent in a global supply chain for technology and sustainment.

Second, the spiderweb is also mobile, moving outside any one spider's control. Companies currently working with the United States may also seek business from other not-so-friendly countries in need of contracted logistics and security support.[35]

As Eccles contends, a country's ability to wage war is ultimately constrained by its economic capabilities, which may be measured by its GNP. In larger global conflicts, the United States will only get the logistics resources if it can outbid all the other competitors. Since most logistics contractors are not U.S. citizens or U.S. corporations, the United States cannot nationalize these private companies or even argue for national loyalty. As a result, war will be more expensive and a savvy enemy could buy up key logistics resources just to keep them from the United States.

Strategically Managing Resource Dependencies

Given its current dependence on global contracting,[36] the United States may be unable to return to Eccles' closed system, where all the raw materials for production are produced solely in the United States. However, the United States can look to the RDP theory for conceptual ideas on how to lessen the risk of its global supply chain.

First, the United States must identify the key power dependence relationships it maintains with its fragile global supply providers.[37] The next key step is to identify any relationships that interfere with the resource exchange between the United States and the foreign contractors.[38] The basic idea is to establish countervailing sources to offset the potential power of a single resource provider.[39]

In the corporate world, for example, Company 1 may depend on Company 2 for raw materials needed for its manufacturing process. Because Company 1 relies on Company 2, it would seek to dilute Company 2's strength by increasing its number of similar suppliers, buying out Company 2, or perhaps working out an arrangement to have a vote on Company 2's board of

directors.[40] Proponents of the RDP note that "managing resource dependence requires careful definition and monitoring of the environment. It also calls for imagination with respect to balancing the power of others by developing the power of your own organization."[41]

Just as private companies manage their resource dependencies, the United States must identify and manage its globalized resource dependencies. Today, the United States does this in a very reactive manner. For the most part, the Nation just identifies supply problems when a critical resource issue is already having a detrimental effect on the troops.

We have laws to keep certain resources within the Nation's borders, but more active involvement is required to truly manage our increasing resource dependencies. In the future, the United States needs a centralized administrative body (or perhaps Government-owned companies) with the proactive mission of managing U.S. resource dependencies to balance power and protect the global supply chain.

For most of our history, the United States acquired national military logistics capabilities through a rather mechanistic, closed organizational system that limited the resources available for war to the resources present within the boundaries of the Nation. Today, globalization has transformed the U.S. military logistics system to a much more open organizational system with unanticipated resource dependencies on external sources.

Although open systems can react quickly to change and are extremely flexible, the challenge is to manage an unprotected resource environment that includes the entire world population. This evolved system poses some serious strategic challenges. Because of the expected expansion of economic globalization, future uninterrupted use of the global supply network will require the United States to constantly counterbalance sole resource powers among its global supply chain.

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[35] This industry already exists among private security contractors (PSCs) hired to protect government agency officials in Iraq and Afghanistan. According to the Government Accountability Office, PSCs are already recruited and hired by the United Kingdom, South Africa, Nepal, Sri Lanka, Fiji, Iraq, the United Nations, nongovernmental organizations, and even the media. ("Rebuilding Iraq: DOD and State Department Have Improved Oversight and Coordination of Private Security Contractors in Iraq, but Further Actions are Needed to Sustain Improvements," Report to Congressional Committees, United States Government Accountability Office, Washington, DC, July 2008, p. 7.)

[36] "Most analysts now believe that DOD is unable to successfully execute large missions without contractor support." (Moshe Schwartz, p. 13.)

[37] Hatch, p. 78.

[38] Ibid., p. 79.

[39] Ibid., p. 80.

[40] Ibid.

[41] Ibid., p. 81.

Quadrennial Defense Review Addresses Force Balance and Contracting Improvements

The 2010 Quadrennial Defense Review (QDR), released by the Department of Defense (DOD) in February, is the first QDR to make current conflicts the priority of budgeting, policy, and programming efforts. The QDR, which covers fiscal years 2011 to 2015, seeks to further rebalance the force and reform DOD's institutions and processes to better support the urgent needs of the warfighter. DOD also wants to ensure taxpayer dollars are spent wisely and that new weapons are usable, affordable, and truly needed.

The QDR addresses the importance of preserving, enhancing, and equipping the All-Volunteer Force and the civilian workforce supporting it. DOD plans to expand its Civilian Expeditionary Workforce to augment military efforts, concentrate on the mental and physical health of all its forces, and make the way DOD equips those forces a priority for improvement.

DOD plans to institutionalize rapid acquisition capabilities without "sacrificing cost and schedule for promises of improved performance." Efforts to improve the Cold War-era U.S. export control system, which is "hindering U.S. industrial competitiveness," and rapid logistics support to forces abroad are also priorities.

DOD also plans to "work to reduce the number of support service contractors, in an effort to establish a balanced workforce that appropriately aligns functions to the public and private sector." With the reduction in the number and type of contractors on the battlefield comes an effort to reduce the cost of contracts. DOD will begin to employ fixed-price development contracts more frequently, constrain the tendency to add program requirements through configuration steering boards, and better link the contract fee structure to performance.

On the acquisition side, DOD plans to add and train 20,000 personnel by 2015 to address shortfalls in contract oversight. DOD will create 9,000 new positions and convert 11,000 contract positions to Government positions. DOD will also be increasing its reliance on independent cost analysis "to ensure that decisions on acquisition and logistics programs are based on the most realistic cost estimates possible." The creation of new programs will also undergo tough scrutiny to ensure that the best alternatives with the fewest risks are selected.

Army Contracting Headquarters Units to Move From Virginia to Alabama

The Army Contracting Command and Expeditionary Contracting Command headquarters will move from Fort Belvoir, Virginia, to Redstone Arsenal, Alabama, by August 2011, resulting in the reassignment of 79 Soldiers and 234 civilians.

Both commands will colocate with the Army Materiel Command and the Army Security Assistance Command, which will also move to Redstone Arsenal.

RECENTLY PUBLISHED

A Leader Development Strategy for the 21st Century seeks to balance the demands of the Army Force Generation (ARFORGEN) model with the educational demands of the force by better aligning timelines for courses and key developmental positions with the deployment cycle. The strategy was developed using lessons learned from ongoing conflicts, assessments of the future operational environment, the Chief of Staff of the Army's Green Book article, "The Army of the 21st Century," and Field Manual 3–0, Operations.

In the strategy, the Chief of Staff establishes eight imperatives to integrate policies, programs, and initiatives "to develop leaders with the required qualities and enduring leader characteristics." The imperatives highlight the need to—

- ❏ Encourage an equal commitment by the Army institution, leaders, and individual civilian and military personnel to life-long learning and development.
- ❏ Balance commitment to the training, education, and experience pillars of development.
- ❏ Use outcome-based training and education to prepare leaders for hybrid threats and full-spectrum operations.
- ❏ Achieve balance and predictability in personnel policies and professional military education in support of ARFORGEN.
- ❏ Manage the Army's military and civilian talent to benefit both the institution and the individual.
- ❏ Prepare leaders by replicating the complexity of the operational environment in the classroom and at home station.
- ❏ Produce leaders who are mentors and who are committed to developing their subordinates.
- ❏ Prepare selected leaders for responsibility at the national level.

The imperatives will guide further changes in leader development and ensure that the Army is able to develop the agile leaders needed to make decisions in an ever-changing environment.

Sustainment Soldiers Support Humanitarian Aid Operations in Haiti

Sustainment Soldiers from across the Army have been providing earthquake victims in Haiti with food, water, and other logistics support as part of Operation Unified Response. Eight personnel from the rapid port opening elements of the Military Surface Deployment and Distribution Command deployed from Fort Eustis, Virginia, and arrived 2 days after the earthquake as part of a U.S. Transportation Command team to identify which transportation and logistics capabilities would best support the relief.

Fort Bragg, North Carolina, initially deployed 896 Soldiers from the XVIII Airborne Corps, the 82d Airborne Division (Air Assault), and other units to provide humanitarian support to survivors. In less than a week, these Soldiers delivered 54,738 pounds of supplies and equipment, including 3,600 gallons of bottled water and 14,400 meals ready-to-eat. Overall, Fort Bragg is expected to deploy as many as 3,000 Soldiers to Haiti in support of Operation Unified Response.

The 3d Sustainment Command (Expeditionary) (ESC) from Fort Knox, Kentucky, had key leaders on the ground within days of the earthquake and sent over half of the ESC over the course of a month to be part of Joint Logistics Command-Haiti.

The first group of 3d ESC Soldiers worked with the Navy and Coast Guard to reopen Haiti's main port, established two logistics hubs away from the airport, and planned for a 2-week United Nations World Food Program surge operation. The 7th Sustainment Brigade has since joined the ESC, as have a number of logistics units from across the services.

The 530th Combat Sustainment Support Battalion, 49th Quartermaster Group, from Fort Lee, Virginia, joined these units in early February. The 49th Quartermaster Group is providing mortuary affairs support to Joint Task Force-Haiti and water purification and distribution, fuel storage and distribution, and logistics support to the World Food Program. The 49th Group Soldiers will remain in Haiti at least through August.

Soldiers of the 331st Transportation Company, 24th Transportation Battalion, 7th Sustainment Brigade, 3d Sustainment Command (Expeditionary), assemble causeway sections to facilitate the loading of equipment onto ships prior to departing for Haiti. (Photo by SFC Kelly Jo Bridgwater, 7th Sustainment Brigade Public Affairs)

Left: A water purification specialist from the 82d Water Detachment, 16th Quartermaster Company, 530th Combat Sustainment Support Battalion, provides fresh water in Haiti. (Photo by SPC A.M. LaVey)

Below: Parachute riggers from the 11th Quartermaster Company, 189th Combat Sustainment Support Battalion, 82d Sustainment Brigade, prepare container delivery system bundles for delivery in support of Operation Unified Response. (Photo by SPC A.M. LaVey)

New Armament Research and Development Complex Is Under Construction

The Army Armament Research, Development and Engineering Center (ARDEC) is in the midst of developing a Fuze Engineering Complex, which will be located at Picatinny Arsenal, New Jersey. The complex is being built in response to a 2005 Base Closure and Realignment Commission recommendation to establish a joint center of excellence for guns, weapons, and ammunition research by bringing together elements currently located at Adelphi, Maryland, under the same roof as other Fuze Division elements.

The $18 million complex includes renovations of current buildings that will be used as office space. Two new research facilities will also be constructed: one for fuze explosive research and the other for fuze electromagnetic research. Two ammunition storage bunkers are also being built, and some of the unit's anechoic (sound absorbent) chamber space will also be renovated. The facility is expected to be completed by October 2011.

TARDEC Constructing New Vehicle Research and Development Facility

The Army Tank and Automotive Research, Development, and Engineering Center (TARDEC) is building the Ground System Power and Energy Laboratory (GSPEL) at Detroit Arsenal, Michigan. GSPEL will be a 30,000-square-foot complex housing eight laboratories dedicated to the research and development, modeling, and testing of ground vehicles of all sizes and their individual components. GSPEL also will provide facilities to simulate a wide variety of environmental conditions—extreme temperatures, humidity, and solar conditions—in which to test manned and unmanned ground vehicles.

GSPEL will be the cornerstone of the Army's next generation of power and energy initiatives and will include laboratories for research and development of hybrid-electric vehicles, fuel cells, alternative fuel and propulsion systems, critical combat vehicle fuel efficiency, auxiliary power, and field sustainability.

TARDEC worked with the Southwest Research Institute in San Antonio, Texas, to develop the demanding equipment and facility specifications for the complex. GSPEL is expected to be completed by late 2011.

Sustainment Center of Excellence Named TRADOC Institute of Excellence

The Army Training and Doctrine Command (TRADOC) named the Sustainment Center of Excellence (SCoE) at Fort Lee, Virginia, an Institute of Excellence on 17 February. The SCoE is the first TRADOC Center of Excellence to earn the designation.

Lieutenant General David P. Valcourt, deputy commanding general of TRADOC, presented the award to Major General James E. Chambers, commanding general of the Army Combined Arms Support Command and SCoE, for the organization's Institute of Excellence accreditation ratings in doctrine, organization, training, materiel, leadership, personnel, and facilities.

The Institute of Excellence award recognizes organizations that have excelled in internal evaluation, external evaluation, and accreditation. Given that the second two areas are hard to achieve without proper internal evaluation, the quality assurance teams within the SCoE played key roles in preparing the institution for success. They were also responsible for preparing the SCoE's subordinate organizations, 11 of which achieved "Institute of Excellence" ratings for the September 2008 to January 2010 accreditation year.

Coming in Future Issues

- ❏ Support to the Polish Military Contingent
- ❏ Aligning Metrics to Achieve Supply Chain Goals
- ❏ Ammo Management Information Systems Challenges
- ❏ The Corps Logistics Planning and Decision Cycle
- ❏ Coblenz 1919: The First Sustainment Center of Excellence
- ❏ Sustaining the Afghan National Army Embedded Training Team
- ❏ BCS3: Take Another Look
- ❏ Army Ammunition Industrial Base in Decay
- ❏ Weapon System Sustainment Sourcing
- ❏ The Evolution of Petroleum Support in the CENTCOM AOR
- ❏ Moving Toward a More Sustainable Army Food Program
- ❏ Contract Oversight in the Operational Environment